

OCT 9 1923

# Railway Age

SECOND HALF OF 1923—No. 14 NEW YORK—OCTOBER 6, 1923—CHICAGO

SIXTY-EIGHTH YEAR

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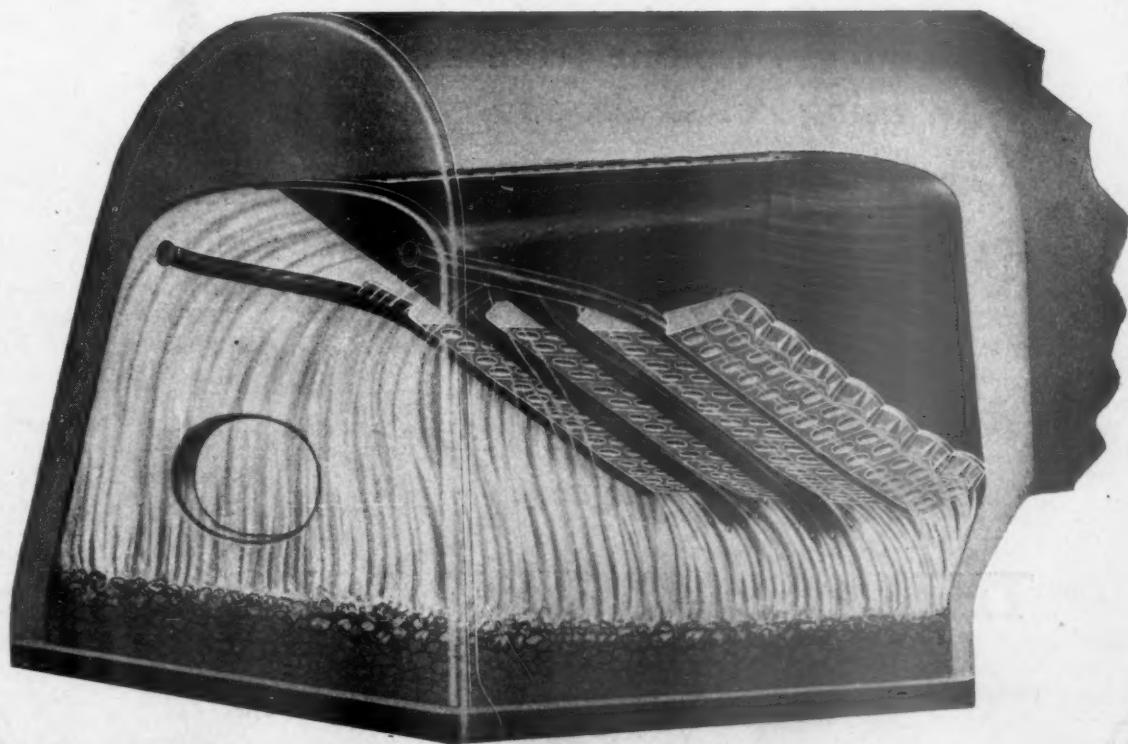
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increased capacity; the lessened flue maintenance, that Arches yield.

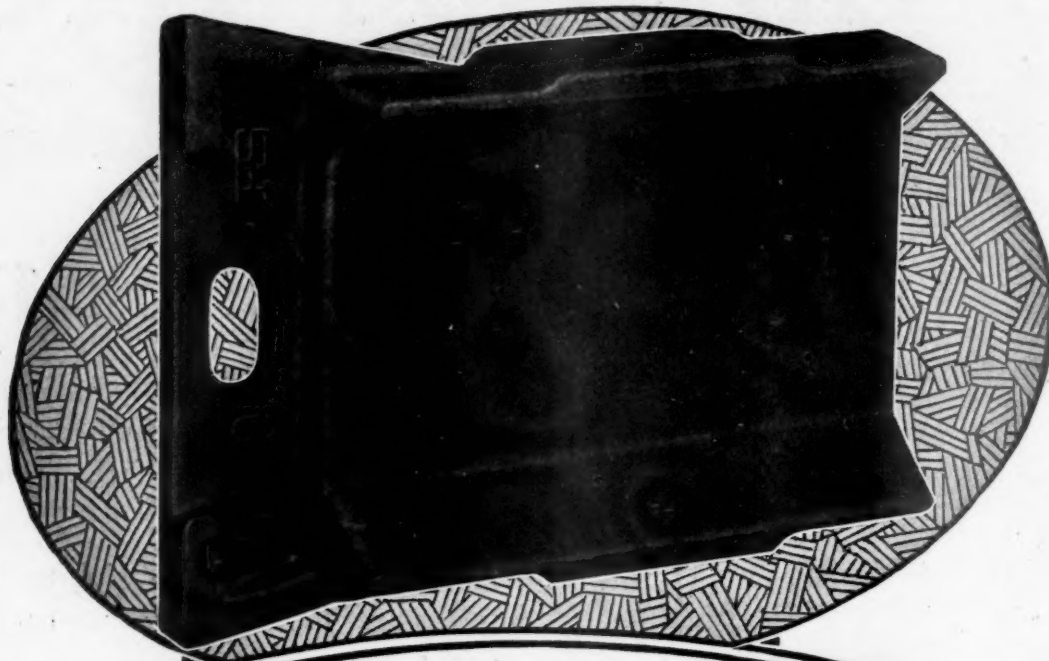
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# EDITORIAL

## Railway Age

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Many railroad officers, particularly shop executives, complain that they are handicapped by a lack of labor-saving equipment and machinery and that they cannot get an A.F.E. (authority for expenditure) for equipment to replace that which is worn out. One way *not* to get an A.F.E. approved is to pre-

### How to Get an A. F. E. Approved

pare it in a slipshod manner, failing to consider all of the important factors, forgetting to present a clear statement of the advantages to be gained and omitting a conservative estimate of the money saving expected. At the present time A.F.E.s. on most railroads must be formally approved by the president, vice-president or general manager and this officer is confronted with a staggering number of requests from department heads, each justifiable, but for all of which money is not available. The executive must, therefore, decide where the needs and possibilities of saving are the greatest. It is easy to understand what becomes of an A.F.E. which is carelessly prepared and does not contain complete, reliable data on costs and expected savings. It is not enough to present an A.F.E. to the management and then forget it. An executive is only human and he is apt to judge the importance of an A.F.E. by the amount of pressure which is brought to bear on him to approve it. If a shop superintendent, for example, needs new machinery he should bring this need to the attention of his superior officers at every reasonable opportunity. If the superintendent of motive power or general manager comes through the shop, tell him about it. Point out that the men are working hard and getting good production (if this is true) but explain how much better they could do and how much money could be saved by putting in the new machinery. Failure to mention the subject is apt to cause the executive to suspect that the machinery is not needed as much as the figures purport to show.

Readers of the *Railway Age* are familiar with the clean-cut issue which has arisen in New England with reference to the

### New England Grouping

matter of railway consolidation. The issue is as to whether in the plan which the Interstate Commerce Commission is ordered by the Transportation Act to prepare the New England roads shall be formed into a New England regional group or allocated respectively to different trunk lines. There has been evidence, notably in the form of a three-to-one vote by the Boston Chamber of Commerce and a four-to-one vote by the Providence business men's organization, that New England public sentiment favored the regional rather than the trunk line grouping. Those who attended the consolidation hearings in Boston last week must have been surprised, notwithstanding prior developments, by the amount and strength of the support given the New England plan. Representatives of commercial bodies from various parts of New England appeared in large numbers to express their views in favor of that plan. It was necessary to continue the hearing several days beyond the time originally intended and it was very apparent from what the various witnesses said in their statements, or upon direct or cross-examination, that the question had been given detailed and careful study, and that the decisions were made only after careful consideration of the problem by boards of directors or the membership as a whole. Votes overwhelm-

ingly in favor, in some cases unanimous, were the rule in nearly every case. Unexpected support also appeared in the form of a statement by Daniel Willard, president of the Baltimore & Ohio, who wanted to go even beyond the proposals made by the supporters of the New England plan, to the extent that he suggested also the inclusion of the Boston & Albany and Grand Trunk. Considerable was made also of a statement by F. J. Lisman of New York who expressed his belief that trunk line control for New England roads would be nothing less than "suicidal." An opposition appeared to present its arguments against New England grouping and in favor of trunk line entrance into New England. It cannot be said that the opposition's arguments were overwhelming by any means and it certainly was not able to show the weight of numbers such as that shown by the advocates of the New England plan. It is more than ever evident that New England opinion is overwhelmingly in favor of New England control of its railroads as represented in the placing of the lines in the consolidation plan in a regional group.

The article on the revision of the statistics of the railways of India, Part I of which appears on another page of this

### Indian Railway Statistics

issue, will have its primary interest to American railway men through the fact that the new statistics are patterned to a considerable extent after the operating statistics in use in the United States. The author of the article, Major F. H. Budden of the Royal Engineers, is an operating officer of the Indian State Railways and is at present in charge of the statistical work of the Railway Board, which board corresponds more or less to our own Interstate Commerce Commission. Major Budden was one of the members of the committee which formulated the revision of the statistical units and methods of compilation. In connection with the work, he visited America and England and was thus given opportunity to study English and American methods of organization and statistical control with considerable care and detail. The committee, therefore, had before it full knowledge and understanding of the statistical requirements of the Interstate Commerce Commission as relates to this country and those of the Ministry of Transport as concerns the United Kingdom, as well as familiarity with the use to which the elaborate statistical compilations in use in both countries are put by the operating managements. It may be presumed, therefore, that the statistics suggested and formulated for the use of the Indian railways and for the Indian Railway Board contain a selection of the best features of the railway statistical methods of the United States and England, as worked out to meet the views of the railway officers and adapted to meet Indian railway conditions. It is of interest that although most of the railway officers in India are English, and therefore most familiar with English conditions, the revision follows rather more closely the methods used in this country than those in use in England. This must not be understood as being the case because our statistics are better or more adequate than those used in England, because there is no evidence that they are. It is due to the fact, as Major Budden points out, that taken by-and-large Indian railway conditions are rather more similar to our own than to those in England. Major Budden has much to say concerning



the units adopted and the reasons why certain units were selected. There is much discussion in this country just now as to whether American railways are not required to compile too many statistics. Major Budden's views should prove of considerable value in this discussion.

The block system is not the block system when permissive signals are given. Disregard of this axiomatic fact was the

#### A Collision Due to Lack of Block System

Fowler, Colorado, on August 13, when five employees were killed and 48 passengers and other persons were injured. The government report on this collision is summarized on another page. An engineman and a fireman misread the name of the meeting station in a dispatcher's order. The order was on Form 19. If Form 31 had been used, the error in reading might have been detected in time. (But it might not; a reading by the conductor in the presence of the station operator may have no influence in preventing a wrong reading by the engineman). The use of Form 19 was allowed because the movement was in (manual) block signal territory. But the trains were to meet at a non-telegraph station, on permissive cards; so that the block signals were no safeguard against errors in or in connection with the written orders. Being in "block-signal territory" is no help unless the block system actually is in use. The simple block signal rule, to allow an engineman to proceed against an opposing train only after he sees a roadside signal which gives him absolute right to the next roadside signal, was the thing needed in this case. The government report calls for the automatic train stop (and no other remedy); but that is a secondary point; the first thing is to establish absolute and unchangeable block sections. There is nothing to indicate in this case that the engineman would have disregarded a semaphore indicating "stop." Those who wish to speculate on auxiliary or contributory causes will find plenty of material in this case. For instance, the conductor, not familiar with the road, became uneasy approaching the meeting point; but *not soon enough*. What percentage of even first-class conductors would have done better? How many trains on *your* road are run, every month, by conductors not fully acquainted with the road?

## Disregard of Tie Specifications

THAT THE EXCESSIVE DEMAND for ties during recent months has revived many of the abuses which prevailed prior to the adoption of a uniform specification is known to the readers of the *Railway Age*, for this situation and the abuses which follow in its wake were described at length in the issue of July 14, page 61. The numerous letters which we have received from producers and railway officers have confirmed our observations that the situation is very unsatisfactory in many areas. As indicated in a recent editorial in these columns, the National Association of Railroad Tie Producers, which is said to enroll in its membership more than 50 per cent of the tie production of the country, has polled its members to ascertain the position which it should take with reference to this situation. On the one hand, it could throw the weight of its influence behind the fair and uniform enforcement of the specifications *which it has adopted* and aid in correcting these abuses. On the other hand, it could condone the conditions which were described on the ground that they are less serious or at least no worse than in the past.

In the September issue of the *Cross Tie Bulletin*, published by the Tie Producers Association as its official organ, the president of the organization indicates that the association has chosen the latter course. In this article it is maintained

that (1) many good ties are being produced and (2) that the roads are getting better ties than ever before. It is also admitted that there are places where improper conditions exist which have affected the quality and the supply of the ties, but it is stated that "this condition is not nearly so bad as it has been in years past."

We agree with the statement that many good ties are being produced for this can readily be demonstrated. We are also inclined to agree with the statement that the roads are getting better ties than ever before. However, this does not controvert the fact that hundreds of thousands of ties are being produced and being accepted by the railroads which depart widely from the specifications with which they purport to comply. As we stated in the article in the *Railway Age* of July 14 and supported by photographs which were typical of hundreds of thousands of ties inspected, the deviations from the specifications in overgrading ties and in accepting ties in which decay is advanced have prevailed to such an extent this year as to threaten the continuance of the uniform specifications by making it difficult, if not absolutely impossible, for those roads which desire to purchase ties and those contractors which desire to produce ties in accordance with these specifications from so doing.

The statement that these abuses are no worse than those which existed prior to the war is not an answer to this situation because conditions have changed. We now have a uniform specification which has been approved for the users by the American Railway Engineering Association and for the producers by the National Association of Railroad Tie Producers where we had no such specification in the past. This specification is of value only to the extent to which it is enforced and any deviation from it tends to destroy its usefulness and its effect. For the Tie Producers Association to condone deviations on the ground that conditions are no worse than those which prevailed prior to the adoption of the specification is an indication of the fact that it has not accepted this specification seriously.

It is disappointing that the National Association of Railroad Tie Producers has not seen fit to stand squarely behind these specifications and to throw the weight of its influence behind their uniform and fair enforcement, for the producers have as much if not more to gain than the railways. The greatest handicap under which the producers have labored has been the wide fluctuation in demand which has prevented them from building up permanent organizations because of the fact that there have been no uniform specifications and no uniform inspection and no one could undertake the risk of accumulating a stock of ties in advance of actual orders because of his inability to determine the inspection to which he would be subjected when he sold them. With a uniform specification, supplemented by a uniform inspection, this uncertainty would be removed and the producer would be warranted in taking advantage of periods of low prices to accumulate stocks of ties. His banker would also be willing to assist him with credit as ties would then become legal tender. For this reason it is surprising that the Tie Producers Association has seen fit to sacrifice what would be the ultimate advantage of its members for such benefits as may accrue during the present temporary period of widespread demand.

Furthermore, conditions are now changing and indications point to the fact that the recent condition of excessive demand will soon be replaced by one of over-production with the result that many railways will undoubtedly take advantage of their position, as they have in the past, to penalize the contractors by installing an inspection which will give them the best of the ties and leave the poorer ones in the hands of the contractors. This condition has always prevailed and will continue to prevail until producers and railways alike agree to enforce the specifications uniformly in periods of excessive demand as well as over-supply.



## Permanence of Public Relations Work

THERE HAS BEEN a great awakening within the last two years among railway executives regarding the need for educating railway employees and the public regarding the railroad business. Never were so many railways engaged systematically and energetically in combating misrepresentations of the railroad industry and in using numerous channels for getting the facts about the business to the millions of people who must be familiarized with them if a fair and constructive policy of regulation is to be established and maintained.

It is easy, however, to detect in what is said about this kind of work and in the methods adopted for carrying it on, a difference of opinion as to whether it should be done merely to meet a present emergency or carried on permanently as an indispensable part of railway management and operation. The higher officers of the railways with respect to this matter may be roughly divided into three classes. These are, first, those who regard such work as almost useless and futile; secondly, those who believe it must be done now but look forward longingly to the time when the present emergency will be past and it will no longer be necessary; and, third, those who are convinced that if private management is to be maintained and to be successful, public relations and personnel work must be carried on in future just as long, as methodically and as intelligently as the work of running trains to handle passengers and freight. In consequence, some railways are practically doing nothing at all; others are adopting obviously temporary expedients, while still others are forming permanent organizations and adopting methods plainly intended to be used not only in the present emergency but after it has passed.

It is a well known tendency of human nature, especially as manifested by most persons who are past middle age, to accept the fact that conditions have changed with reluctance and to have a very strong preference for doing the same things they have been used to doing in the same ways that they have been used to doing them. Most high railway officers were approaching or had reached middle age before the conditions now surrounding railway management, and which have been created chiefly by railway regulation, came into existence. In consequence, they were used to performing their duties without much thought of what the public or the employees might think, and many of them are naturally prone to desire to do things as they have done them in the past and to hope, and even believe, that in some way or other the conditions under which they formerly worked will be restored and that all these new-fangled ideas about public relations and personnel work can then be thrown on the junk pile. Those who think thus are naturally prone either to make no changes in their organizations or methods, or to adopt only emergency methods and make temporary changes in their organizations to carry out these emergency methods.

Those who thus think and act are as far wrong as it is possible to be. Those who are right are the men who recognize the fact that the conditions surrounding railroad management have changed permanently and that, therefore, new and permanent organizations must be formed and methods adopted to deal with the new conditions. What is the proof of this? It is the simple fact that the present "emergency" in the railroad business actually has already, with varying degrees of seriousness, existed for at least fifteen years. Furthermore, it has constantly tended to become more acute. Never in their history were the railways assailed by such reckless propaganda or threatened by such vicious and confiscatory legislation as they have been within the last three years. The reason for this is plain enough. Effective regulation of the railways has become a permanent policy in this

country. Public sentiment determines the purposes and effect of this policy of regulation. Demagogues and labor agitators can always play upon public sentiment, and the effective policy of regulation that has been adopted affords them a means of making more ruinous attacks upon the railroad industry than they can possibly make upon any industry which is not subject to effective regulation.

The policy of effective government regulation of railways actually having been adopted, it has created conditions surrounding the railroad business which never existed before it was adopted. As it has afforded a misinformed and prejudiced public sentiment a new weapon of enormous power with which to attack the railways, so it has made it absolutely necessary for the railways to do all they can to so educate public sentiment regarding their business that it will not be misinformed and prejudiced. Does anybody believe that regulation of railways is ever going to be abandoned in this country? Does anybody believe that the time will ever come so long as government regulation is continued that a hostile public sentiment will not use government regulation to oppress the railways? Does anybody believe the time will ever come when demagogues, if public sentiment is supposed to be hostile to the railways, will not appeal to this public hostility as a means of furthering their political ambitions? As long as every intelligent railway officer answers all of these questions in the negative just that long every intelligent officer ought to be in favor of his railway forming a permanent organization and adopting permanent methods to educate the public and employees regarding railway matters.

## Simple Economics for Workers

THERE HAS BEEN a widespread demand in recent years for a simple treatise on the economics of business and industry which could be readily understood by the workers. Ordinary text books on economics, or discussions of this subject, are so written that they do not appeal to the average worker. In these days of moving pictures, attractive magazines and illustrated newspapers with prominent headlines and attractive, readable text, it is difficult to secure the attention of the average man to serious discussions of this sort. It is vital, however, that the workers should clearly understand the fundamental principles involved and it is up to the employer to find ways and means of presenting these so as to enlist the interest and hearty co-operation of the employees. Unfortunately, few organizations have made any serious efforts in this direction and too frequently when they have done so, the material has been presented in the form of complicated charts or statements which were involved and difficult to understand by men who are not trained thinkers.

Carl F. Dietz, president of the Bridgeport Brass Company, made an address at a recent meeting of the Chamber of Commerce of the United States, in which he showed how his company had developed a successful means of educating and interesting the workers in its operations. In a nutshell, he has found that the workers do not understand charts, but that they can readily comprehend comparisons of figures when they are presented in the form of three dimensions by blocks. In analyzing an operation or statement, the different factors which are involved can be indicated by different colored blocks. One application of this is shown in an illustration accompanying an abstract of Mr. Dietz's address, which will be found on another page of this issue. The photographic illustration conveys the impression of three dimensions, although the fact that we are not able to reproduce the colors takes away somewhat from its force.

While Mr. Dietz's illustrations and comments are related to the manufacturing industry, the various things which he brings out in his address can be applied in a different way,

but with equal force, to conditions in the transportation industry. Mr. Dietz recently made a similar address at the Industrial Conference at Silver Bay, N. Y. He had an exhibit of the colored blocks on the platform; the audience was a mixed one, consisting of workers, foremen, executives, representatives of personnel departments and railway representatives. The effect was really remarkable, enthusiastic comments being made by all of the various elements represented.

## The Cents of the Railroad Business

ONE OF THE PRINCIPAL CAUSES of the troubles of the railway system of this country is that it is so big. People read statistics showing that railway earnings amount to billions of dollars a year. Each reader is likely to conclude that directly and indirectly he is paying a large amount in rates to help make up these vast earnings. People read charges that the railways are greatly over capitalized; that the valuation made by the Interstate Commerce Commission is excessive; that these things result in the railways being allowed to earn large profits. Each is likely to conclude that he is directly and indirectly paying a substantial part of his income to swell railway profits. Therefore, he is disposed to join in the agitation for "squeezing out the water," as the radical politicians phrase it, on the theory that it would save him a good deal of money.

But the railroad business of this country is an enormous business. It serves a vast country and a huge population. The railways are carrying the products and the commerce of 110 million people. The rates collected to defray their expenses and taxes and enable them to pay interest and dividends are divided directly and indirectly among all these people. When the statistics are reduced to readily comprehensible figures, most persons will be surprised to find how small they show is the average amount each inhabitant of the country pays the railways, and especially how small is the amount that each person pays toward their interest and dividends.

How much would the average person guess is the amount of rates which, on the average, each inhabitant of the country directly and indirectly pays to the railways each day? In the first six months of 1923 the total earnings from all their rates and business averaged 17 million dollars a day. That may seem a lot of money. But the payment of it was divided among 110 million people. Therefore, the average earnings of all the railways per capita per day—the average amount that they collected in rates from each inhabitant—were only 15.4 cents. Railway rates were the lowest in 1916 that they ever have been. How much has been the increase in the amount paid by each person to the railways since then? Their total earnings in 1916 were \$9,630,000 a day. The population of the country at that time was 101 million. Therefore, at that time the average cost of railroad transportation to each person was 9 cents. The increase per person since 1916 has been 6.4 cents a day.

The railways get almost all their earnings from the freight and passengers they carry. Their total freight earnings in 1916 were just about \$7,000,000 a day. That was 7 cents a day for each inhabitant. Their total freight earnings in the first six months of this year were \$12,500,000 a day. That was 11 cents a day for each inhabitant. The increase in the average cost of freight transportation to each person has been 4 cents a day. Directly and indirectly each person pays freight rates upon every conceivable class of commodities—food, clothing, fuel, material to build houses, etc. In 1916 the railways, for the 7 cents they charged, rendered a freight

service that was equivalent to hauling one ton of freight 9.1 miles daily for each person. In the first half of 1923 for the 11 cents they charged, they rendered a freight service equivalent to hauling one ton of freight 10.2 miles daily for each person.

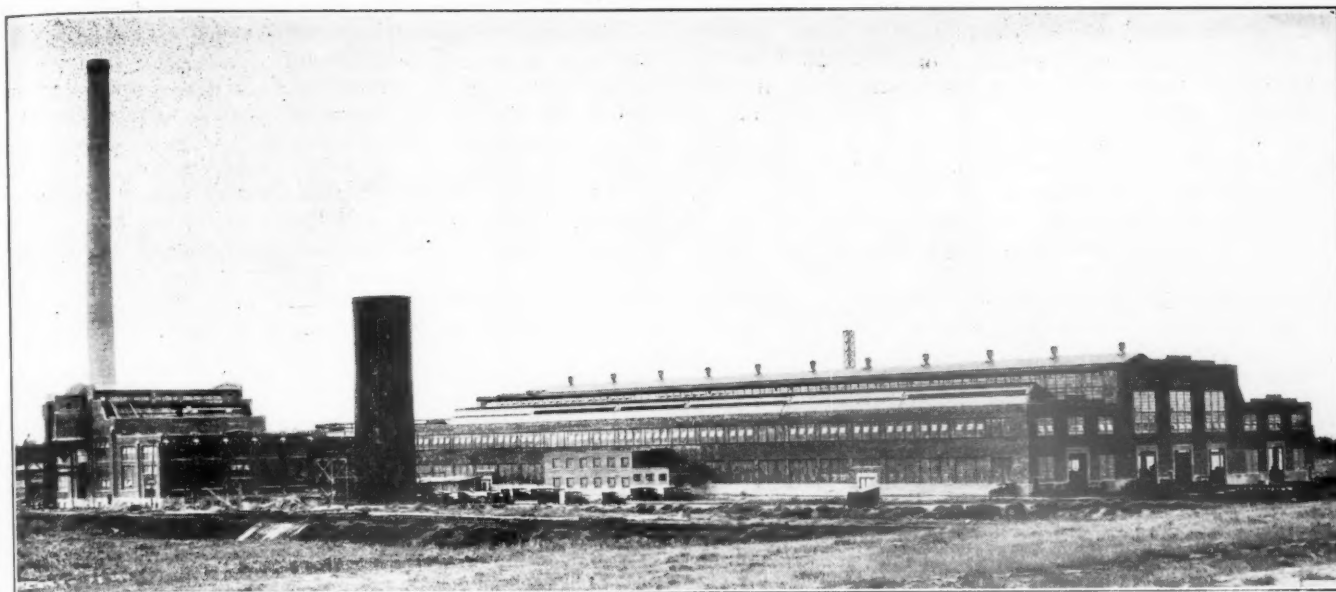
The earnings of the railways from their passenger business in 1916 averaged \$1,930,000 a day. This was 1.9 cents daily for each person—less than the cost of first class postage on a letter—and for this they rendered a service equivalent to carrying each inhabitant a little more than nine-tenths of a mile. In the first half of 1923 their passenger earnings were \$2,978,000 a day, or 3 cents for each inhabitant of the country. For this charge they rendered a service equivalent to hauling each person a little less than nine-tenths of a mile.

How much does each person contribute toward the profits made by the railways by hauling not only freight and passengers, but also mail and express? "Net operating income" is the technical phrase for that part of the earnings which the railways have left after paying their operating expenses and taxes, and is that part of their earnings from which they pay all interest and dividends. The net operating income of the railways in the year 1916 averaged \$2,840,000 a day, or 2.8 cents daily for each inhabitant. In the first half of 1923 their net operating income averaged \$2,453,000 a day, or only 2 cents daily for each inhabitant. In other words, the profit the railways made from all the service rendered by them amounted daily for each inhabitant of the country to enough to buy one postage stamp or two sticks of chewing gum. The average American family consists of 4.3 persons. Therefore, if the railways had not in the first half of this year been allowed to earn any net operating income at all the saving to the average family per day would have been 8.6 cents. At the present high cost of movies the average family would have had to allow this saving to accumulate 10 or 15 days before the entire family could have gone once to the movies on it.

Since the railways have been earning this year 15.4 cents per day per capita, and have been able to keep only 2 cents of this for their security owners, the question naturally arises as to what became of the rest of the money. People who on the average are paying the enormous sum of 15.4 cents a day for railroad transportation are naturally anxious to know what is being done with all the money. It took 12 cents out of every 15.4 cents of earnings to pay operating expenses and taxes, and  $7\frac{1}{2}$  cents of this were the wages of employees. In other words, while each person in the country paid 2 cents a day toward railway interest and dividends, each person in the country paid  $7\frac{1}{2}$  cents a day toward railway wages. In 1916 each person paid 4 cents a day toward railway wages. While the contribution of each person toward railway profits has declined eight-tenths of one cent a day since 1916, the contribution of each person toward railway wages has increased  $3\frac{1}{2}$  cents a day. This is because the average wages paid by the railways in 1916 were a little over 4 million dollars a day, while in the first half of this year they were about \$8,300,000.

There is a great struggle going on over railway regulation in this country. The great issue in this struggle is what valuation shall be placed on the railways and what railway operating income they shall be allowed to earn. The outcome of the struggle will determine whether the railways will be able in future to render the public the transportation service its welfare requires, and even whether the railways shall be owned and operated in future by private companies or the government. And how much actual difference in money will it make, on the average to each person whether the railways are allowed to earn the net return to which they claim they are entitled, or the return to which extreme radicals like Senator Brookhart claim they should be restricted? *Not more than 1 cent a day.*





*The Main Building and Power House*

## Burlington Builds New Locomotive Shops

Construction on a New Site of Ample Area at Denver  
Affords Opportunity for Well Planned Development

A \$3,000,000 PROJECT for a general locomotive repair shop on a new and independent site at Denver, Colo., has afforded the Chicago, Burlington & Quincy opportunity for the development of a plant which presents an unusual example of effective grouping of the various units. Not only is the arrangement a compact one, requiring minimum travel in routing the work from one shop to another, but it affords ample opportunity for the extensive enlargement of any or all of the units without departing in the least from the operating plan adopted in the initial layout.

The new shop building is being constructed as part of a comprehensive plan adopted by the Burlington several years ago for the purpose of providing general repair facilities of large capacity, so distributed as to require minimum mileage in the movement of locomotives to and from the shops. It supplements the large plant built at Havelock (Lincoln), Nebr., in 1910, and a similar large development at West Burlington, Iowa, completed in 1917. The layout at Denver is intended primarily for heavy repairs to locomotives on the lines of the Burlington in Colorado, Wyoming and western Nebraska and those of the Colorado and Southern, a subsidiary of the Burlington.

The shops are located near the north limits of the city, approximately  $2\frac{1}{2}$  miles from the Union station, on a site of approximately 280 acres which was purchased by the railroad for this purpose. The buildings which are being constructed at this time include a machine and erecting shop, a boiler shop, a blacksmith shop, a power plant, a store house and office building, and an oil house, together with an oxy-acetylene generating plant, lye vats, and a complete water supply system.

### Well Planned Arrangement

The grouping of these units about a focal point is well illustrated in the general plan, on which it will be seen that the shop is centered at the intersection of a craneway of 100-ft. span extending east and west and three erecting shop

tracks which cross the layout in a north and south direction. The machine and erecting shop is centered over these three tracks south of the craneway while the blacksmith shop and the boiler shop are placed to the west and east of these tracks, respectively, on the north side of the craneway, and all three of these units are so situated with respect to surrounding buildings as to permit extensive enlargement in directions away from the operating center. East of the machine shop and separated from it by a north and south craneway of 84-ft. span is a storehouse designed for extension to the south, while the powerhouse, standpipe, chimney, etc., located west of the erecting and machine shop, are separated from it by a distance of 166 ft., giving ample space to avoid any possible interference with future development.

The entire layout is further concentrated by the fact that the north and south craneway between the machine shop and the storehouse extends for a distance of 12 ft. into the area covered by the main east and west craneway, thus affording a ready means of transfer from one craneway to the other. A difference of 12 ft. in the elevation of the crane rails on the two runways insures against any interference in the operation of these two intersecting craneways. A concrete roadway 16 ft. wide extending along the south side of the east and west craneway for its entire length, with cross roadways connecting with the blacksmith and boiler shops and the store and oil houses and also with the lye vat situated at the extreme west end insures adequate facilities for trucking operations, while an area 61 ft. 8 in. wide by 264 ft. long under the north and south craneway, paved with concrete, affords an excellent place for the storage of castings. The east and west craneway is equipped with a 50-ton traveling crane having two 25-ton hoists to facilitate the handling of locomotive boilers, while the south craneway has a 10-ton crane.

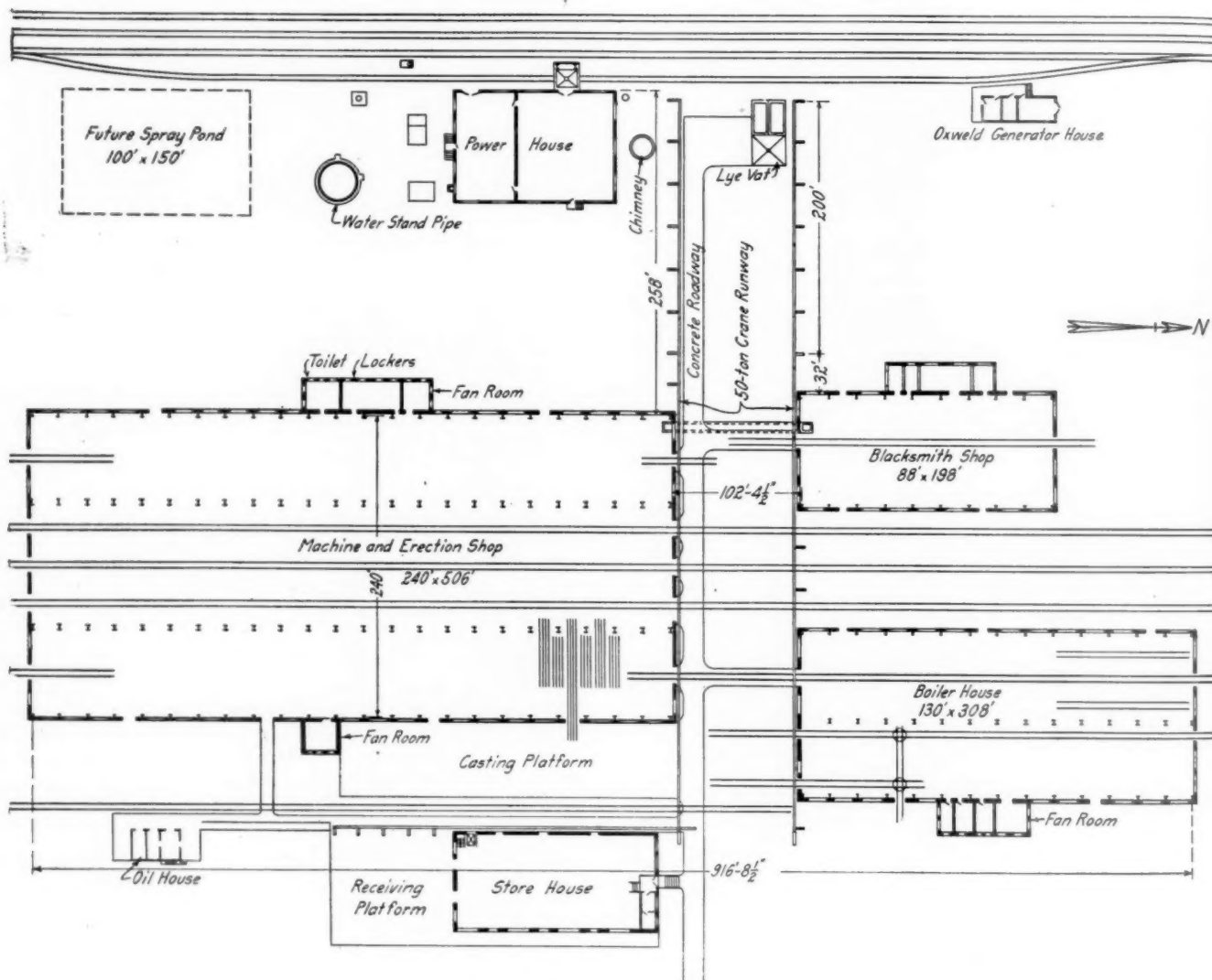
### The Machine and Erecting Shop

The machine and erecting shop is a steel frame structure, 243 ft. wide by 509 ft. long. It has a 100-ft. erecting bay

in the center with a machine bay of 70-ft. width on each side. The erecting bay has a clear height of 50 ft. to the bottom chord of the roof trusses while each of the machine bays has a height of 32 ft. The enclosing walls are of concrete, 10½ in. thick to a height of 5 ft. 1 in., above which they are constructed of 8-in. glazed tile. Windows are of steel sash construction glazed with ribbed glass. The roof deck is of 3-in. wood sheathing on timber purlins of first quality Douglas fir, which span between roof trusses which are spaced 22 ft. center to center. The roof is covered with a composition roofing and all flashing in connection with the steel or tile work is of copper. The floor in this

cab departments, as well as other light machine work. The tool room occupies practically all of the space in the four central transverse bays of the light machine shop, a portion two stories high, being occupied by the general foreman's office, the walls of which are largely glass so as to command a full view of the shop from its central location.

This building will be heated by the indirect system of heating. Two large fan and heater units, located in small wings on either side of the building, supply hot air through concrete and tile ducts below the floor to sheet-metal register heads located at alternate columns on the side walls as well as the intermediate column rows. Toilet and locker facilities



General Plan of the Shop Group

building is a 6-in. concrete slab with a rubbed float finish. All track doorways are equipped with rolling steel doors.

The shop is of the longitudinal type with three pit tracks spaced 30 ft. center to center and extending the full length of the erecting bay, which will accommodate about 35 locomotives at one time. This bay is served by two 125-ton cranes on an upper crane runway, and one 15-ton crane on a lower runway. The large cranes are also provided with 15-ton auxiliary hoists.

The east machine bay will be used for heavy work and is served by two 15-ton traveling cranes and 25 wall jib cranes. Some of the jib cranes are equipped with fast electric hoists and others with high-speed triplex hoists.

The west machine bay contains the tool room, together with the air brake rigging, superheater, brass, electric and

are provided on two floors of a wing adjacent to the fan room on the west side of the building about midway of its length. The washrooms are provided with wash fountains.

The natural lighting of the building is well provided for. In addition to large glass areas in the walls, large windows are provided in the clerestory walls of the center bay above the roofs of the side bays, while the roof of this center bay is provided also with a skylight 15 ft. wide for its full length. In addition, each of the two side bays is provided with a saw-tooth monitor with continuous operated steel sash. Artificial illumination is obtained by the use of high candle power Mazda lamps, providing an average intensity of 0.97 watts per sq. ft. for the machine shop and 0.67 watts for the erecting shop in order to give sufficient light for night work without the use of local illumination.



The shop is equipped with steam, air, water, oxy-acetylene, electric welding, and electric light connections at convenient points. The machine tools are all electric-driven and are operated by individual motors with the exception of one group drive in the cab shop. The majority of the motors are equipped with push-button control, and the planers are all equipped with reversing planer motor drive.

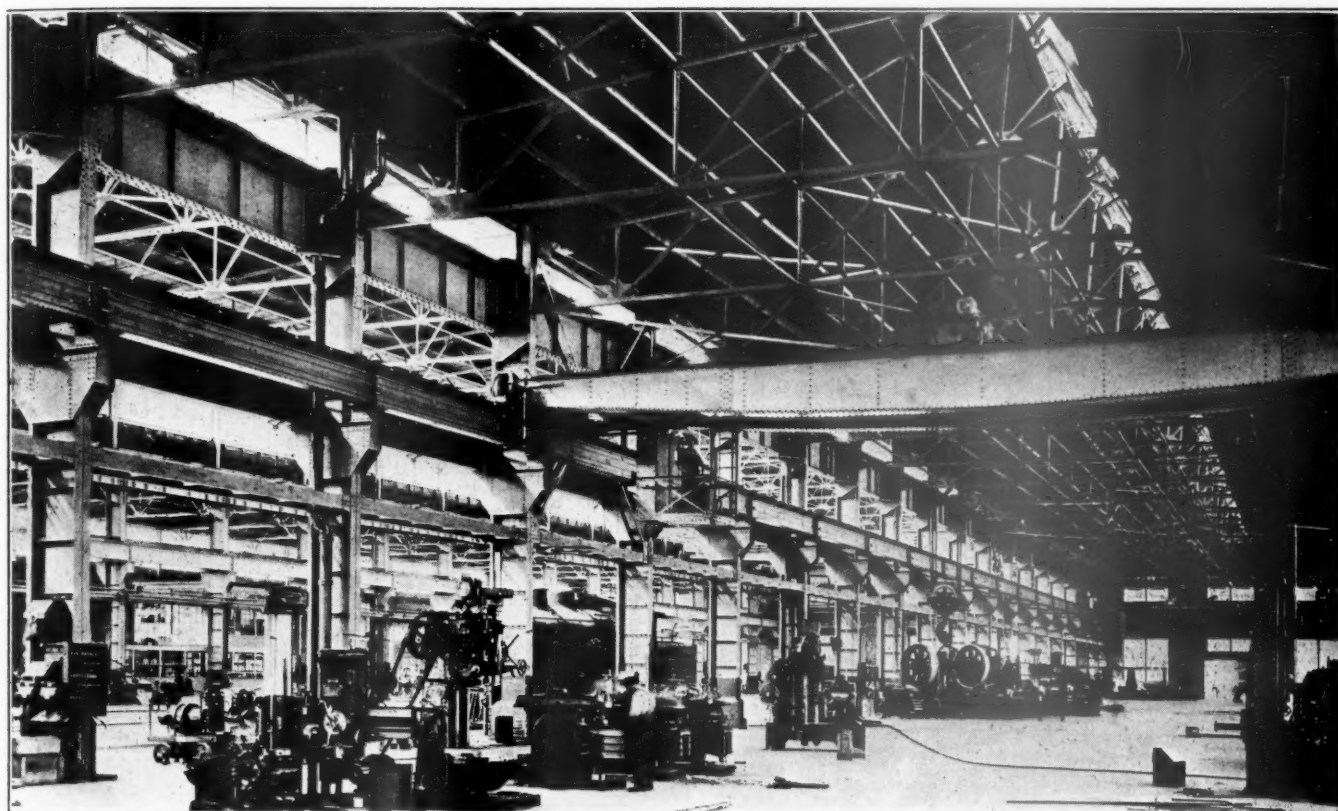
#### The Other Buildings Are of Similar Construction

The boiler shop is a building of similar construction, 133 ft. wide by 311 ft. long, divided into two bays. The west bay is 70 ft. wide and 33 ft. high under the roof truss and is to be used for boiler and tender repairs, including the heavy boiler shop machinery. This bay is equipped with two 25-ton electric traveling cranes, one of which has a 1-ton hook for lighter work. The east bay is 60 ft. wide and 20 ft. high under the roof trusses, and will contain the flue and

concrete flat-slab construction with brick curtain walls. The roof slab is covered with a heavy composition tar and gravel roof. The building has a 12-ft. platform at car level on each side and extending 100 ft. beyond the rear of the building for a width of approximately 106 ft.

All three floors of this building are served by an automatic push-button, electric elevator; and, in addition, two material chutes are provided for handling material between the platform and the basement. The side of the building next to the machine and erecting shop is provided with a material track, and the layout is such that a similar track can be added later along the other side of the building.

All of the floor space in the building is devoted to storehouse purposes except the front 60 ft. of the second floor, which will house the offices of the shop superintendent and the storekeeper, and space on the first floor for the office of the shop surgeon. The stores space is provided with skele-



The East Machine Bay Housing the Heavy Machine Tools

ash-pan departments. The flue department will have the latest type of electric welder.

The blacksmith shop is a steel-frame building, 90 ft. wide by 200 ft. long, with a height of 22 ft. to the roof trusses, with brick walls. The roof deck, roofing, windows, and ventilation arrangements are of a construction similar to that in the other buildings. A monitor 10 ft. high extends practically the full length of the building and is equipped with continuous operated steel sash throughout its length.

This building is well equipped with jib cranes, and has a through track which extends to the yard craneway for handling heavy material through the shop. The shop is equipped with steam hammers of from 800-lb. to 5,500-lb. size, together with forges, furnaces, forging machine, etc. Each forge, or pair of forges, is equipped with an individual motor-driven blower to give greater flexibility, reliability, and economy of operation than is possible with a system having one large blower for the entire shop.

The store house and office building is a two-story and basement structure 82 ft. wide by 162 ft. long, of reinforced

ton steel shelving in sections three feet wide and approximately eight feet high. This shelving is arranged so that there are two longitudinal aisles 9 ft. 8 in. wide for the full length of the floors and cross aisles 3 ft. 8 in. wide between the sections of shelving. Rod and pipe racks of steel construction are also provided.

The natural lighting of this building is provided for by a transom window arrangement in all walls, and the artificial lighting by means of lights suspended from the ceiling directly over the aisles between the shelving. The sash provided for the office section is of the reversible steel type with brass hardware. The stores building is heated by the vacuum type of direct radiation.

The oil house is a reinforced-concrete structure, 25 ft. wide by 40 ft. long, with a 12-ft. platform on the track side and a 15-ft. platform on each of the two adjacent sides. The house is served by the same track as the store house, and is connected to the storehouse platform with a runway 6 ft. wide and 100 ft. long. Both the oil house and the storehouse platforms are connected by ramps with the track level

roadways, as material will be transported from both of these buildings to the shops by means of power tractors and trailers.

The first floor of the oil house is divided into three rooms, an oil pump room, a waste storage room, and a paint storage room. The oil pump room is equipped with 18 hand-operated, self-measuring pumps. This building is heated in the same manner as the stores building. Special fire-extinguishing apparatus using live steam is also provided.

#### A Modern Power Plant

The power plant is housed in a building 89 ft. wide by 128 ft. long with a concrete chimney of 12 ft. inside diameter and 250 ft. high close by. It has a steel frame, brick bearing walls and concrete roof and floor slabs, the roof slab being covered with heavy composition roofing. Ventilated steel sash are provided throughout, in addition to a high ventilated

cinder pocket and the coal bin. Thus the track hopper feeds directly into the main conveyor without the necessity for an auxiliary cross conveyor. The capacity of the conveyor is 50 tons per hour. Screenings will be burned when available, but as it may be necessary at times to crush the coal, a single roll crusher is provided, the installation being such that it may be by-passed when crushing is not necessary. The coal fed to the boilers is weighed by a traveling weigh larry. Spotting of the cars on the hopper track is facilitated by the installation of a motor-operated capstan-type car puller.

Feed water for the boilers is handled by two outside-packed, plunger boiler feed pumps, pumping from a 4,600 hp. open feed-water heater, the water being automatically measured by a venturi meter piped so that the water fed to any individual boiler can be measured for testing purposes. Each boiler is equipped with draft gages and an indicating



West Bay, Showing Tool Room

monitor over the boiler room. The doors and frames are of the fireproof "Kalomine" type. The coal bunkers are of reinforced concrete and steel while the ash bunker is constructed of brick with a steel plate hopped bottom.

The boiler room is 78 ft. wide by 87 ft. long, and is equipped at present with four horizontal water tube boilers of a total capacity of 1,624 hp., provided with 100-deg. superheaters, automatic stokers and soot blowers. The boilers are arranged in pairs on opposite sides of a central alley, and occupy only about one-half the space in the boiler room so that there is ample space for a 100 per cent addition to the boiler capacity at any time in the future. The boiler room is served by a track hopper with a cinder pocket directly over it, the two being located just outside the west wall on the center line of the alley between the boilers. This arrangement greatly facilitated the installation of the coal and ash-handling equipment, which consists of an endless pivoted bucket conveyor with its lower run on the center line of the alley in the basement between the ash hoppers under the boilers and with the upper run across the tops of the

steam flow meter in plain view of the fireman. An automatic damper is provided to control the chimney draft and the speed of the stoker engines. The boiler room also contains a 1,500-gal. steam-driven Underwriters' fire pump.

The engine room is 47 ft. wide by 86 ft. long, and contains the air compressors, motor-generator sets, and electric switchboard, together with a gage and meter board. This room is equipped with a 10-ton, hand-operated, traveling crane to facilitate repair of the equipment. There are two steam-driven compressors of approximately 3,400 cu. ft. displacement each. Because of the loose, sandy soil about the plant site the compressor air intake is provided with the latest type of air filter. The compressors discharge into two large air receivers located just outside the building, other receivers being placed at the machine shop and the boiler shop.

Electric power is purchased as 13,200-volt, 60-cycle, 3-phase, current and is stepped down to 440 volts by a steel outdoor sub-station at the power house. This sub-station has a capacity of 1,000 kv.a., and is protected by oxide film



lightning arresters. All of the low-tension switching is done at a 13-panel switchboard, which is of the dead-front type so far as any of the 440-volt current is concerned. This board also controls two 200-kw. synchronous motor-generator sets, which furnish 230-volt direct current for the traveling cranes and adjustable-speed motors throughout the shops. Electricity is distributed to the shops in an underground tile duct system, and the lighting current is transformed at the various shops to 110 volts. The basement of the engine



Looking Along the Crane Runway Towards the Power House

room is used as a pump room and also contains the toilet, locker and shower facilities for the powerhouse employees.

#### Water Service for Various Needs

Water for the shops and power plant is provided by two deep wells, 558 ft. deep, and is pumped by an air lift, the air being furnished by the shop air compressors. This water is pumped first into a two-compartment cistern, of which one compartment of 10,000-gal. capacity acts as a drinking-water storage cistern and overflows into the second compartment of 20,000-gal. capacity, which acts as a storage

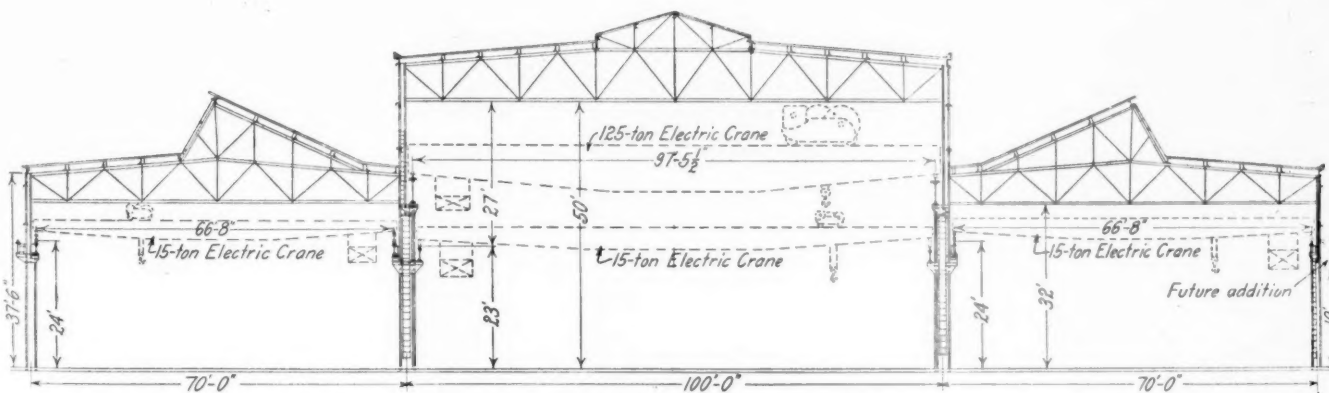
located about the plant at points convenient for extinguishing a fire at any locality. By means of a by-pass line around the fire pump, equipped with a check valve, the fire-protection system is normally under standpipe pressure.

The service water supply is distributed throughout the plant and throughout all of the different buildings in a 10-in. cast-iron main, and is used for all purposes except drinking. With the aid of a small duplex pump, the drinking water is piped through a separate continuously circulating system, in connection with the first compartment of the storage system, thus providing the freshest water from the wells. Sanitary drinking fountains are provided at convenient points on this line. The drinking water returns to the 20,000-gal. service water cistern, as does the return water from the air compressor, and the overflow from the heating returns and the boiler feed-water heater, in order to conserve all of the water possible.

High pressure steam service piping is provided in the machine and erecting shop, boiler shop and blacksmith shop. This line, as well as the compressed-air line and the low pressure steam line are carried on the craneway structure from the power house to the machine and erecting shop, also between the blacksmith shop and the boiler shop. These pipe lines are carried from the machine and erecting shop to the blacksmith shop under the 100-ft. yard crane runway through a concrete tunnel, 5 ft. wide by 6 ft. 6 in. high.

Electric light and power are furnished to all of the buildings, the feeders to the various buildings being lead cables in underground tile conduit and the inside wiring being in conduit throughout, with the exception of the longitudinal overhead feeders, which are run open on the roof trusses in the machine shop and the boiler shop. Direct current for electricity for welding is furnished by the use of single-unit, portable welding outfits in the machine and erecting shop and the boiler shop.

The fuel-oil supply for the furnaces throughout the plant will be supplied from a station consisting of two 12,000-gal. steel storage tanks and a pump house located about 200 ft.



Section Across the Main Erecting Shop

cistern for general purposes. Water for general shop purposes is pumped from the second compartment to a 500,000-gal. standpipe 100 ft. in height. A steam-driven duplex pump and an electric-driven, centrifugal pump are furnished for pumping this supply, each of these pumps being automatically controlled by the level of the water.

The water service supply main from the standpipe is taken off through a 14-in. cast-iron line running directly from the standpipe to the powerhouse building. The boiler-feed and other power-plant water supply is taken directly from the 14-in. main in the powerhouse building, which also runs directly to the suction of the fire pump mentioned above. The fire protection system is supplied through a 10-in. cast-iron main, which serves 14, 4½-in. two-nozzle fire hydrants

north of the boiler shop, adjacent to the tracks entering this building. A 12,000-gal. tank is also provided at this point for the storage of locomotive fuel oil, which is of a different grade than that used in the furnaces. The pump house at this point will handle the oil from the tank cars and locomotive tenders, and will supply locomotive tenders with oil. Fuel oil will be supplied to the plant through a circulating system which will be paralleled by steam-heating pipes.

The development, design and construction of this improvement have been handled by the Chicago, Burlington & Quincy, under the supervision of W. T. Krausch, engineer of buildings. The construction of the entire work has been handled by the Stearns-Roger Manufacturing Company, of Denver. The construction work started late in June, 1922.

## Freight Car Loading

WASHINGTON, D. C.

**R**EVENUE FREIGHT CAR LOADING during the week ended September 22 amounted to 1,060,436 cars, a decrease of 144 cars as compared with the previous week, but an increase of 99,298 cars as compared with the corresponding week of last year and of 186,795 cars as compared with 1921. Coal loading still reflected the loss of traffic caused by the anthracite strike and grain and grain products loading was 2,847 cars less than during the corresponding week of last year but all other classes of commodities showed increases as compared with the last two years.

The freight car surplus for the week of September 15-22 showed a slight reduction to 59,008, including 34,771 box cars and 16,840 coal cars, while the shortages averaged 13,515, including 5,803 box cars and 5,482 coal cars.

The railroads on September 15 had 10,792 locomotives in need of repair, or 16.8 per cent of the number on line.

This was an increase of 275 over the number of such locomotives on September 1, at which time there were 10,517, or 16.3 per cent. Of the total number, 1,054 or 1.6 per cent were in need of light repair, a decrease of 71 compared with the number in need of such repair on September 1, while 9,738, or 15.2 per cent, were in need of heavy repair, an increase of 346 over the number at the beginning of the month. The railroads on September 15 had 2,914 serviceable locomotives in storage.

On the same date there were 165,284 freight cars in need of repair, or 7.3 per cent of the number on line, a decrease of 10,043 as compared with the number on September 1. Of the total, 130,112, or 5.8 per cent were in need of heavy repair on a decrease of 7,117, and 35,172, or 1½ per cent in need of light repair, which was a decrease of 2,926.

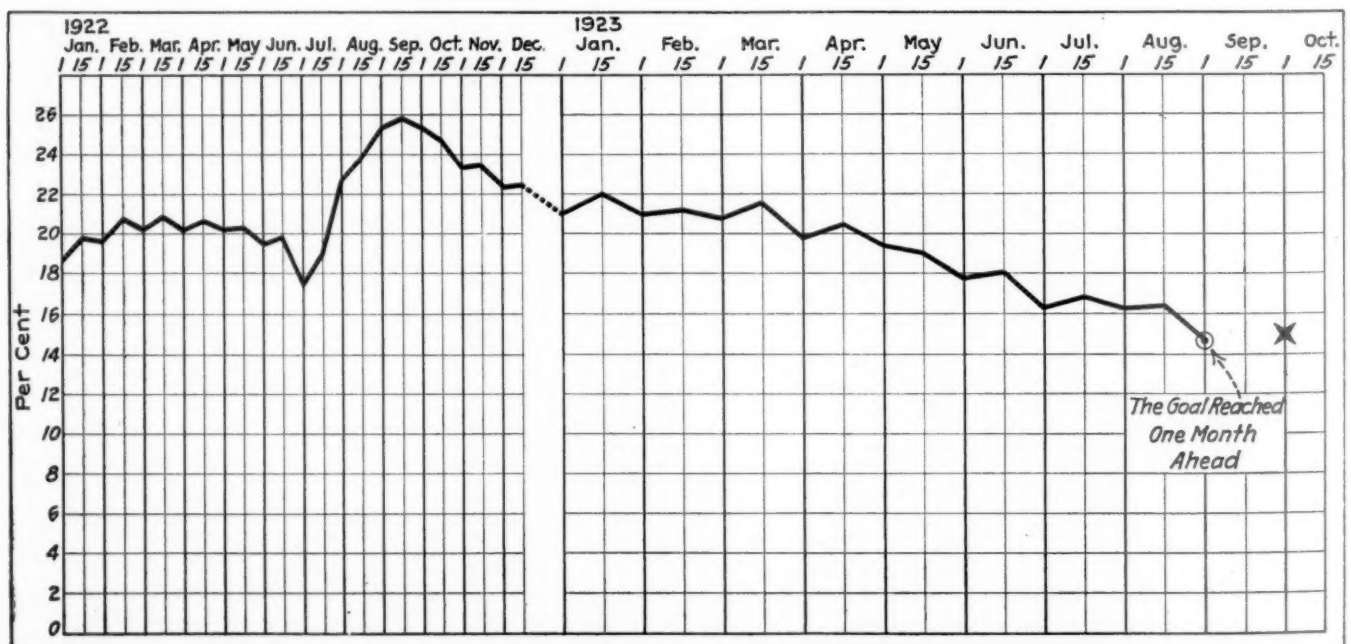
A new record for a day's movement of cars, both loaded and empty, was established on September 26, when 52 Class I roads moved 1,013,724 cars, exceeding the previous record of September 19 by 41,521 cars.

### REVENUE FREIGHT LOADED

SUMMARY—ALL DISTRICTS, COMPARISON OF TOTALS THIS YEAR, LAST YEAR, TWO YEARS AGO. WEEK ENDED SATURDAY, SEPTEMBER 22, 1923

Districts	Year	Grain and grain products	Live stock	Coal	Coke	Forest products	Ore	Mdse. L. C. L.	Miscellaneous	Total revenue freight loaded		
										Corresponding period		
										1923	1922	1921
Eastern	1923	7,948	3,437	41,820	3,659	5,824	8,002	68,751	100,031	239,472	240,032	211,709
	1922	7,786	3,322	57,253	1,599	6,001	4,845	65,051	94,175	220,189	208,394	170,093
Allegheny	1923	2,921	3,120	50,547	6,217	3,421	14,052	51,490	88,421	43,457	26,807	32,804
	1922	3,053	3,341	56,054	4,116	3,466	9,359	50,540	78,465	5,362	141,659	120,766
Pocahontas	1923	284	401	28,230	492	1,822	107	6,759	5,362	3,270	180,116	150,313
	1922	250	376	16,263	192	1,332	35	5,039	3,270	3,270	164,785	155,180
Southern	1923	3,738	2,641	24,953	969	23,846	1,776	40,568	43,168	137,409	137,235	137,235
	1922	3,287	2,571	19,334	789	17,419	1,122	36,918	39,326	119,105	99,646	67,398
Northwestern	1923	16,171	11,203	10,724	1,521	18,730	48,141	31,240	42,386	415,659	365,139	335,220
	1922	19,219	9,120	9,195	1,412	15,945	32,433	28,796	34,193	374,391	361,138	873,641
Central Western	1923	13,365	16,774	20,431	320	11,721	2,831	35,875	63,468	1,060,436	961,138	873,641
	1922	14,151	14,745	21,806	411	8,510	2,194	34,210	59,153	928,858	923,806	831,288
Southwestern	1923	4,479	4,175	5,819	161	8,265	618	15,686	31,555	70,758	879,902	828,883
	1922	4,007	3,349	7,299	132	5,558	457	13,085	25,759	59,646	879,902	828,883
Total, West. dists.	1923	34,015	32,152	36,974	2,002	38,716	51,590	82,801	137,409	415,659	365,139	335,220
	1922	37,377	27,214	38,300	1,955	30,013	35,084	76,091	119,105	374,391	361,138	873,641
Total all roads	1923	48,906	41,751	182,524	13,339	73,629	75,527	250,369	374,391	1,060,436	961,138	873,641
	1922	51,753	36,824	187,204	8,651	58,281	50,445	233,639	334,341	928,858	923,806	831,288
	1921	52,906	32,769	170,156	5,091	48,364	30,335	232,724	301,296	99,298	879,902	828,883
Increase compared	1922	2,847	4,927	4,680	4,688	15,348	25,082	16,730	40,050	186,795	879,902	828,883
Decrease compared	1921	4,000	8,982	12,368	8,248	25,265	45,192	17,645	73,095	186,795	879,902	828,883
Increase compared	1921	4,000	8,982	12,368	8,248	25,265	45,192	17,645	73,095	186,795	879,902	828,883
Decrease compared	1921	4,000	8,982	12,368	8,248	25,265	45,192	17,645	73,095	186,795	879,902	828,883
September 22	1923	48,906	41,751	182,524	13,339	73,629	75,527	250,369	374,391	1,060,436	961,138	873,641
September 15	1923	54,462	39,785	171,830	13,704	74,760	76,661	249,262	380,116	1,060,580	937,221	852,552
September 8	1923	46,782	35,716	152,996	13,543	66,256	71,694	217,670	324,201	928,858	823,247	749,552
September 1	1923	54,604	39,201	206,610	13,970	77,279	78,193	246,984	375,726	1,092,567	923,806	831,288
August 25	1923	54,950	36,413	203,076	13,513	77,957	77,918	244,265	361,840	1,069,932	879,902	828,883

Compiled by the Car Service Division, American Railway Association.



Locomotives Held for Repairs Requiring Over 24 Hours on September 1 Amounted to 14.7 Per Cent



# Educating Workers in Fundamental Economics\*

## How to Tell the Story Clearly and in Such a Way That They Can Readily Grasp It

By Carl F. Dietz

President, Bridgeport Brass Company, Bridgeport, Conn.

THE THOUGHT underlying our subject is predicated on the assumption that the spread of knowledge is not only desirable but necessary, in order to bring a harmonious working condition in organizations made up of large numbers of individuals of varying talents, varying responsibilities and varying ability. Lack of understanding first breeds suspicion and after a while, if the desire for a better understanding of the things affecting the individual in question is not brought about, suspicion gradually develops into distrust. A mind not permitted to grasp or understand the fundamentals with which it comes in daily contact and which is unable to work out those fundamentals for itself, becomes very fertile ground for destructive thoughts in which an antagonistic spirit can sprout and soon become a very disturbing element.

### Why Educate Employees in Economics of Business

I have many times been impressed by the desire of the country's manufacturing forces to know more of "what it is all about." They are thirsting for information and unhappily too much of the information they are now permitted to gather is either gotten in the evening at meetings of which most of us cannot altogether approve, or at the noon-hour listening to a radical orator. At these places they are told things which represent falsehoods or which are at best only half-truths, and without some other means of understanding whether or not the statements made to them are true, they are more apt to credit them—readier to believe, since no one takes the trouble to refute or correct them.

There has been a good deal attempted in the matter of bringing economics to that form where it can be understood by a mind only partially trained—say, to the extent of the mental development of a child of 10 or 12 years of age—to a mind which has never been called upon to reason for itself and on its own responsibility. The endeavor has been made to present in pictorial form something which can be understood in every language, and then let the picture tell the story. The tendency has been to construct these pictures in a manner much too complicated for those to whom they are to be presented, so that the average worker, having presented to him at the outset a chart such as we ordinarily see, does not understand it and becomes frightened at it. He knows he cannot understand it and he makes up his mind not to try. He has had no training to equip him for the task.

### Foreman Link Between Management and Worker

It is absolutely impossible to reach thousands of the workers at one time unless they are organized in small groups; and we must depend upon that highly important link between the management and the workers—the foreman. If the foreman does not understand economics to the extent that it affects his department, he becomes merely a driving force for production, without regard to the human element involved and its needs in other directions. Foremen will be inspired to acquaint themselves with the fundamentals of economics affecting their departments, if they feel that they are likely to be called on to instruct the workers in their departments or answer questions inspired by teachings reaching into the

ranks of the workers themselves. We think it is possible, and just as necessary, to reach the workers at the bench as it is to reach the foremen.

Without recommending a specific method for carrying out a program of this kind and educating the factory workers in the large plants, a method we have found effective as a first step may be useful. We have shop committees composed of workers elected by the shop organization itself; each department elects its own representative who sits in the works committee with the representative of the employer. In a few words the fundamentals underlying these shop committees are summed up as follows: "The plan provides a means for developing a clearer understanding of the mutual problems of the company and its employees, which it is hoped to obtain by means of a free interchange of opinions and suggestions in the committee meetings, on all matters of mutual concern and interest within the business. None of the provisions of the plan are to be construed as curtailing the authority or lessening the responsibility of any executive or committee of executives of the organization, or of the officers, or the board of directors of the company."

The representatives of the employees act on behalf of the employees in matters pertaining to wages, working conditions, safety, sanitation and all other matters of mutual concern and interest as relations within the business may determine. These shop committees concern themselves only with the questions referred to, and it is a perfect delight to sit quietly and listen to the opinions and experiences the members bring to the discussion of wages, working conditions, safety, sanitation, savings, insurance, sick benefits, overtime questions and all manner of things. In almost every case by far the greater majority of them are satisfactorily settled between the representatives of the management at these committee meetings, and the workers themselves, by mutual agreement. Questions of policy naturally are passed on to the management.

This plan has worked out extremely well, but it did not go far enough in itself in taking up the subject of the study of fundamental economics. So, through the instrumentality of these organizations of shop committees, we thought it best to have all the organizations in our plants come together at certain specified times for the purpose of having presented to them in as simple a manner as possible such fundamentals as we thought we could effectively bring to their attention, and then gradually develop a plan by which we could carry instruction down deep into the organization itself. The foremen ultimately will largely have the responsibility of bringing to their own workers in their own departments, the very thoughts and the very discussions we are trying to bring to this rather broad cross-section of our organization.

### Our Plan of Teaching the Foremen

At these meetings about 250 are invited. The foremen, the sub-foremen, employee representatives, as well as most of the junior executives and office workers attend. The cafeteria at one of the plants is employed, where a light supper is served by the company, the official program starting at 7.00 p. m. and lasting three or more hours dependent upon the interest of the members in asking questions calling for further explanation or discussion.

We are trying to have the workers understand what indus-

\*From an address delivered at the eleventh annual meeting of the Chamber of Commerce of the United States.

try-is all about and give them some conception of the ramifications of modern business, its purpose, its responsibilities, its hazards, its problems, its returns. The subjects were prepared by the executive heads of the major groups and tied together so as to carry the basic thoughts through the entire system. Each evening is started with an appropriate educational moving picture selected to introduce the presentation following it.

How many men come to our shops, apply at the employment office and are given a job, are then sent to the foreman and put at a machine to learn some operation which the man is expected to perform, not being told anything else about the business? He does not know where the raw material comes from. He does not know where the finished product goes. Material comes to his machine, there to have some operation performed on it and then it leaves. He knows little or nothing about it. He wants in most cases to know something about it. In many cases he wants to know something about the business with which he is connected. He wants to know just what part his particular function is in the whole scheme of things.

Sometime ago, owing to the technical character of our operations, we thought it necessary to have our office force better acquainted with what we were making and how. Upon joining our organization, they would hear for the first time certain technical terms used to designate our products, which meant nothing to them. All business men know what truly remarkable results come from the stenographic departments under those conditions. We divided them up, boys and girls, into small groups, and took them through the plant. It had a most salutary effect on them in exciting their interest. The reaction thus obtained might mean a good deal, not only with respect to office workers, but in the case of others in the organization.

One man in the tube mill said, "When are we to be taken through the plant?" Here was an important point brought to our attention—that we should consider these many others as well—and it was a good one. He said, "I came into this plant to work and I have been here for a number of years. Each morning I come in a certain door, and punch the clock, and I go to my station and while there throughout the day I see certain raw material coming in, and we are doing something to it and then it passes away. What does this company make, anyhow? What is the variety of its products?" That thought we found was not only in his mind, but also in the minds of many other workers. How can we expect a worker to have either much interest or pride in his work when we not only permit but cause him to move in so limited a mental horizon?

It is, of course, difficult to bring thousands of workers to a full understanding of all the things a plant does, but in some way it should be done. And when they once understand, if they have any pride in the performance of their work, they begin to feel a kind of personal relation toward the institution, and what it means to them, and they are not so likely to believe any and all sorts of thoughts placed or attempted to be placed in their minds.

In our talks we present intimate business details—even having slides of balance sheets, profit and loss statements and operating statistics shown—all the various items are discussed at length and in detail, using the simplest possible language and illustrated by simple, every-day, homely examples.

#### Facts Presented Graphically by Colored Blocks

I have already referred to charts and the complexity which characterizes the preparation of many which are frequently presented. The average group of factory workers immediately shies away from a statistical chart of any kind. One may use a pointer and painstakingly explain such a chart with little or no impression. After all, we are dealing with minds

accustomed to concrete objects that have mass, form and color. Charts can only be bi-dimensional and the maze of the lines with curves like a range of mountain peaks is forbidding.

In order to overcome this difficulty, we have conceived a different method of presenting essential data. It seemed that physical methods would be effective, in that they visualize proportions in mass and would have the added attraction of color and novelty. Furthermore, by dividing the problem into its essential elements, each represented by a physical something, each element can be separately handled and discussed. All these elements can then be built up into a composite whole, each, however, retaining its identity.

The color block system which grew out of this thought served its purposes well, exciting a lively interest. As we developed it, we ourselves learned the amazingly simple form in which even abstract matters can effectively be presented, as well as the diversity of its application. Take first the matter of wages. Every worker in the plant must think very seriously of the nature of the pay envelope; but in having him think of the pay envelope he must not think only of the dollars in the envelope without considering their relation to everything else. If such were the case, we would only disarrange perspectives and relationships and bring about unbalanced conditions, which always make it necessary to suffer the penalty of a reaction.

When wages, or the earnings per hour, are related to the cost of living, and the cost of living is taken from some authoritative source, such as the National Industrial Conference Board, then we have some facts to show to our factory people, which they can well understand.

Let us take a wooden block representing say 100—the cost of living in 1914. At that time the average hourly earnings were also taken on a basis of 100. The purpose is to show how the cost of living has increased and how the wages have increased from year to year, and then how they both reacted later. Successive changes brought living costs up to the positions indicated in 1918, 1919 and 1921 (see illustration). From the 1921 position living costs declined, as shown, until 1922, where they practically remain today.

Wages during this same period also increased and declined and again have slightly advanced, as indicated. These are direct relations and proportions and it must be agreed that we have a visualization which every man, even if he speaks little English, can understand. With that in his mind he is not so ready to listen to or be misled with radical talk. That is just one application which may be made of this principle. Of course, wages in terms of production is what manufacturers and even the nation as a whole is and should be interested in. The relationship of wages to cost of living was a more simple one to arrive at, but the relationship to production can and should be worked out for each plant.

We have felt that our people should know something about what it costs to make goods. They should know how the money obtained from the sale of merchandise or fabricated products is distributed. They should know something about the expense items of cost with which they do not come into contact themselves, and of which they have very little realization. When it becomes known that a salesman has lost a large order the foreman will often be asked why the order was lost to the company. The reply is generally vague, something like this, "How did you expect us to get that order with our overhead so high?"

The average shopmen think overhead is wholly represented by the front-office people. They do not know that a large factor of overhead is represented by the contributing efforts of other workers. They think only of the labor that goes into it, and figure the difference between material and labor cost against sales price is profit. That is what they hear outside and we have not taught them differently and, if they know no better, what can they do? They cannot refute the state-



ment, as they have no basis of knowledge with which to refute it.

### How to Analyze the Sales Dollar

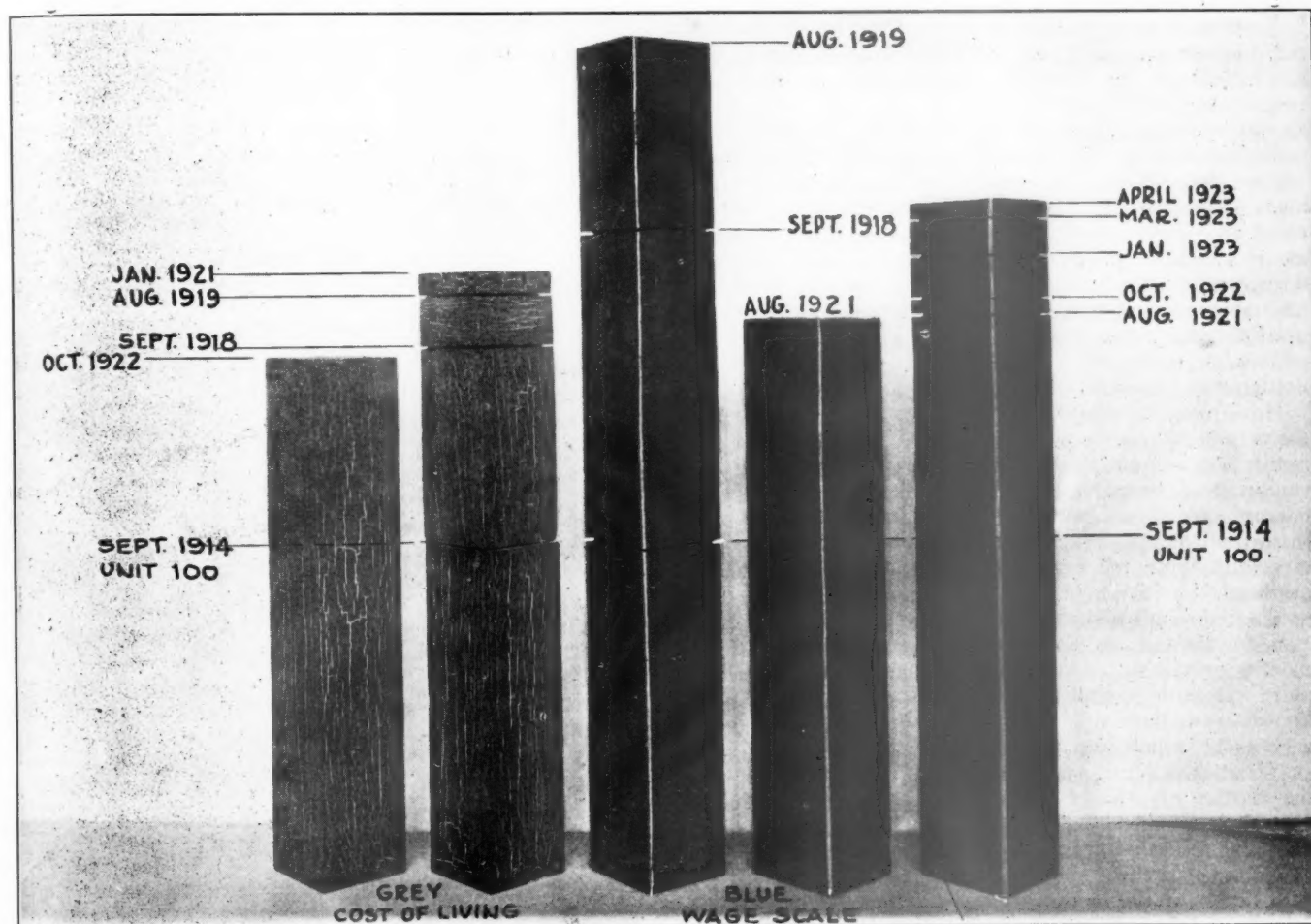
Very few take into consideration that items of rent, depreciation, power, light, heat, maintenance, repairs, research, accounting, selling and administrative expenses are items of cost. Very few even think of the items directly known to them but disregarded,—attendance, tool and die making, waste and spoiled work—as important cost factors.

The year 1921 was a sad one for manufacturers generally, and our people as well as a lot of others were working short time; many of them were not working at all. Many of them did not know what hit them. Some of them still think there

of sales is illuminating very frequently to individuals not working at the bench. We should know what it is, and we want those dependent upon the success of our industry to know.

(Mr. Dietz here showed by means of blocks of different colors the analysis of a sales dollar. Each item of cost was represented by a different color and as the series of blocks for each quarter of the year were placed alongside one another, it was easily possible to see the trend of these costs during the year. They were also compared with a block representing the one dollar sales value. It was thus possible quickly to see whether there was a loss or profit and roughly about how much.—EDITOR.)

By means of such physical illustration the relations of the



Relative Changes in Wages and Living Costs. In Both Cases the Unit Is Taken As 100 in September, 1914, Represented by the Lowest Blocks in Columns 2 and 3

was a conspiracy to give them a drubbing. In fact, one sometimes hears now, as evidenced by occasional newspaper articles, that industry is still holding back in order to take it out of the men at the bench or machine. They hear and read of stock dividends being paid; they hear of surpluses being capitalized, and they haven't the slightest idea of what it all means. They think it is simply so much stock handed out to the stockholders. Ever so many people believe that surplus represents cash in the bank. Many of them are surprised when they learn they can buy a share of stock in a concern by which they are employed. That is a pitiable condition; but it is one that we can correct if we apply ourselves to it.

Most concerns are dependent for their income on what goes through the sales ledger. Each dollar of sales has to be divided in some way. Out of it must come cost, profit and surplus, and an analysis of the fundamentals of the dollar

factors exhibited strike deep and each point can be fully emphasized as the building-up process continues.

One or two more illustrations will serve to give a little further understanding of the applicability of the system. Surplus has been referred to as little understood by not only factory workers but also many others who might properly be expected to know something of such matters. During a year of losses, the bulwark of surplus saves the factory worker his livelihood in many cases. In 1921 many payrolls were paid entirely out of surplus. Build up by proportionately sized blocks, the surplus growth during profitable years and loss during adverse years and set up against this the wages of labor and the wages of capital, and some most illuminating understandings result.

Factory people hear about dividends and of small capitalization and high dividend rate far beyond the rate carried by government securities, and it seems to the average man of

the shop that the profit taken is unfair and inordinate. They never stop to think that the amount of the payroll is many times the total of dividend payments; that dividends are paid only periodically representing the wages of money and that the payroll is made out every week.

#### Some Things Most Employees Don't Know

Reference has been previously made to the conception of some workers to the effect that manufacturers are an easy-going crowd always ready to "take it out of labor." All they can ordinarily see is the manifestation of a few items that seem to indicate to them that there must be a tremendous contribution made by the workers in general to the success and prosperity of the guiding spirits of the various enterprises.

How many men in industry realize that before it is even possible for them to project themselves into an industrial organization and get a job, it was necessary for someone to invest three thousand to five thousand dollars for each man so employed? This practically means that someone has to capitalize each worker to that extent. How many workers realize that the capital required to establish an industry must come from the savings resulting from the product of effort and work and that without a return beyond wages of money and labor, industry could not grow—would stagnate—development cease and new opportunities for the progressive and aggressive coming generations be non-existent? So, until someone comes along and stakes a large number of our population to the extent of that amount of capital they cannot be used in industry.

How many of the workers having savings realize that theirs and the savings of others, by reason of the wide ramifications of our banking system, may be so combined and employed at times to financially assist and support local enterprises? The discussion aroused by the presentation of these fundamentals was in every case interesting and varied, especially those relating to financial matters, surplus and overhead.

The morning after one of these meetings, one of our men came in late and explained his tardiness by stating that some months previously an unfavorable comment about the company was made to him which he could not refute, having no knowledge of the matter in question. It so happened that the very point which apparently troubled him was fully discussed at the meeting and from his own picturesque language the reaction of a better understanding may best be realized. He said: "I could not come to work this morning until I had hunted that fellow up to tell him he was a damned liar."

On some of these shop committees girls of foreign birth with little training or education sit. One of them had difficulty in understanding even the simple explanations attempted and so expressed herself to her neighbor who promptly replied: "If we all try to understand some of these things, we will not be so dissatisfied half the time." These are only indications of the character of much that has come to us and we may say that we are at least much encouraged.

Sooner or later we must reach our whole population, by and large, in much the same way. In a very modest sort of way we are trying something of this kind. A series of articles on economic fundamentals has appeared in our daily paper each Thursday for nine weeks, occupying paid space approximately eight inches of two columns. Simple language and large type are essential to this kind of publicity. These articles, prepared by Robert S. Binkerd, publicist of New York, were signed by the Bridgeport Chamber of Commerce, Manufacturers' Association, Rotary, Kiwanis, Lions and Exchange Clubs, thus clearly indicating what elements of the community sponsored them.

One of the principal features to observe in all this kind of work is the need of simplicity and clarity of presentation. The simplest words and many every-day homely examples must be used in order to carry the thought and not require

the audience to tax its mental capacity in searching for an understanding of words and pictures.

If the executives of a manufacturing organization will cause the fundamentals to be developed understandingly, free of all the complexity which frightens the average worker, a much better understanding of the problems of management will invariably bring about more harmonious thought.

## Pullman Cafe Parlor Car

**T**WO CAFE PARLOR CARS, an interior of one of which is shown in the illustration, have recently been placed in Pullman service on the Atlantic Coast Line between Wilmington, N. C., and Rocky Mount, and between Augusta, Ga., and Florence, N. C. They are intended for use in trains where the traffic is not sufficient to warrant carrying diners. Buffet parlor and sleeping cars have proved satisfactory under these conditions up to a certain point, but it has been found that accommodations were lacking or were inconvenient under some circumstances and the cafe parlor car has been developed as an experiment to fulfill this need.

The two parlor cars were rebuilt at the Pullman Car Works, 10 revolving chairs being provided in one-half of



Interior View of New Pullman Cafe Parlor Car Recently Put in Service on the Atlantic Coast Line

the car while three tables seating four each and three tables seating two each, are provided in the other end. The interior of the car is finished in vermilion with ceilings of light grey. The chairs are trimmed with green plush and the carpets are of a greenish-brown pattern. The chairs in the dining section are finished in green leather, and the sofas in the smoking compartments in brown leather. Both cars are electrically lighted. The crew consists of a chef, a waiter and a porter, the latter assisting the waiter.

The kitchens are large and of a capacity not only to care for the parlor car passengers, but also for those from other cars on the train. In each car is a large refrigerator for general supplies and ice boxes for milk, butter, eggs, etc. There is a broiler for grilled food and urns for preparing soups, eggs and coffee. Solidified alcohol or "canned heat" furnishes the necessary fuel for cooking.



# Baltimore & Ohio Common Dividend Restored

Put on 5 Per Cent Basis—Refunding of One-Fourth of Long-Term Debt in 1925 Road's Big Problem

THE DECLARATION of a quarterly dividend of 1¼ per cent on the common stock by the directors of the Baltimore & Ohio on Thursday, September 26, represents the realization of a confident expectation that the common shares would be put on the dividend basis before the end of 1923. It emphasizes the remarkable expansion in Baltimore & Ohio net earnings and it puts to rest the question as to whether Baltimore & Ohio bonds may continue as

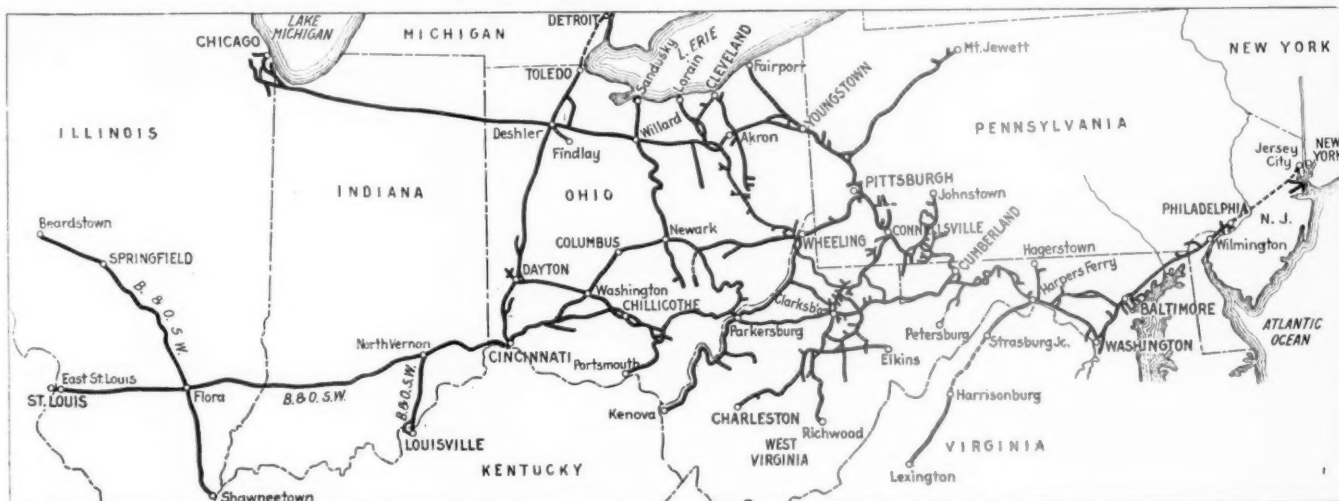
that instead of a declaration of a quarterly dividend at this time the directors would more likely declare a semi-annual dividend in December. The action at the September meeting was made possible by a net corporate income or net after fixed charges of \$19,696,482 for the first nine months of 1923, and by a net operating income of \$34,755,742, an amount greater by \$22,264,522 than the net operating income for the same period of last year and comparing with the Baltimore & Ohio annual standard return for operations during federal control of \$28,031,146. Baltimore & Ohio net has, in fact, been sufficiently good this year so that there was available for common dividends as of September 30, an amount estimated to be no less than \$12,091,954, even after the appropriation of the full year's four per cent dividend on the preferred stock and an amount of \$5,250,000 to complete the appropriation of \$17,500,000 required under the provisions of the loan agreement of July 1, 1919.

For the past months the most important item in connection with Baltimore & Ohio activity has been the question as to whether the directors would find their way clear when they held their meeting in September, or as was considered more likely in December, to declare a dividend on the common stock. There was similar talk of a dividend at about this time last year, although it did not materialize in action because of the adverse effects which were soon in evidence as a result of the railway shopmen's strike. Those who had hopes of a dividend in 1922 pointed out the favorable earnings which the road had been reporting for the early months of the year, in spite of the coal strike, which might have been expected to prove especially adverse to the Baltimore & Ohio because coal constitutes over one-half its total revenue tonnage. Much was made also of the provisions calling for the restoration of the dividend before the end of 1922 in order to maintain Baltimore & Ohio bonds as legal investments for savings banks and trust funds in New York state. Possibilities of dividend payments were negated when the earnings reports for the months of August and September, 1922, showed net railway operating deficits or, in other words, when the cost of the shop strike, which started on July 1, 1922, began to be made known. As a matter of fact the shop strike cost the Baltimore & Ohio about \$7,500,000, according to the company's estimate, and it is now quite apparent that the direct-

## STATEMENT OF EARNINGS ISSUED BY BALTIMORE & OHIO DIRECTORS AFTER DIVIDEND MEETING

		Increase or Decrease over same period previous year
Railway operating revenues during the nine months to September 30 of present year (September estimated) were .....	\$194,923,952	\$54,577,157
Railway operating expenses .....	149,294,635	31,127,448
Net railway operating revenues .....	\$45,629,317	\$23,449,709
Taxes, hire of equipment, joint facility rents, etc. ....	10,873,575	1,185,187
Leaving net railway operating income of .....	\$34,755,742	\$22,264,522
To which is added other corporate income .....	4,585,345	245,591
Making gross corporate income .....	\$39,341,087	\$22,510,113
Corporate income deductions, including fixed charges, etc., amounted to .....	19,644,605	459,927
Net corporate income .....	\$19,696,482	\$22,050,186
From which there has been deducted the six months' dividend on the preferred stock paid September 1, 1923 .....	1,177,264	
Leaving a balance of .....	\$18,519,218	
In accordance with the decision of the board at its meeting on June 27 last, to anticipate payment and thus complete the full appropriation of \$17,500,000 required under the provisions of the loan agreement of July 1, 1919, there has been appropriated out of the income of the company, ...	\$5,250,000	
And there will be required to provide for dividend on the preferred stock for the last half of the year 1923 .....	\$1,177,264	
	\$6,427,264	
Leaving the available income as of September 30, 1923 .....	\$12,091,954	

legal investments for the savings banks and trust funds of New York State and other states having similar regulations. As confident as was the expectation that the common dividend would be restored before the end of 1923, it was not so generally expected that the directors would be able to take this step at their September meeting. It was the general view



The Baltimore & Ohio

ors would have made a grave mistake had they declared any dividend with that situation confronting them.

The Baltimore & Ohio is now in a very different position from every point of view from what it was a year ago. Its earnings for the past several months have been remarkably good, its equipment is presumably in as good condition as that of almost any railroad of the country; there is no congestion of freight on its lines and the reports received by the *Railway Age* from various quarters are to the effect that fast freight service is being handled on time and to the practically complete satisfaction of shippers. Its equipment condition during the shop strike became very bad. At one time it had more than one-half of its locomotives held for repairs requiring over 24 hours, a percentage of no less than 52.5 being reached on September 15, 1922. An important point in the situation is that the favorable net earnings of the past several months have been secured even with the heavy charges to expenses made necessary by the restoration to good condition of the large proportion of unserviceable equipment.

As far as concerns the legality of the Baltimore & Ohio bonds as investments for savings banks and trust funds in New York state, this has been covered by extension of the time within which the dividends on the common must be restored. The legality of the bonds as investments for such fiduciary institutions would have been continued if the common dividends had been restored before the end of year 1924.

#### Reasons Dividend Was Expected

The last meeting of the Baltimore & Ohio directors prior to the one at which the dividend was declared was held on June 27, at which meeting it was decided that the time had not yet come to declare a dividend on the common stock. The directors issued a statement following the meeting, however, that was accepted as pointing out quite plainly that if business continued good throughout the remainder of 1923, there would be every expectation of a declaration of a semi-annual disbursement on the common at the December meeting. This expectation, now happily realized, received sufficient acceptance so that the Baltimore & Ohio common stock for some time prior to the dividend declaration was quoted on the stock market in the neighborhood of 50, which is a high price for a non-dividend share. Such a price would only have been quoted in the confident expectation that a return on the stock would be inaugurated in the near future. The statement mentioned above contained an earnings report showing that for the first six months of 1923 the Baltimore & Ohio had earned a net after fixed charges of \$12,758,350, as compared with \$4,686,506 in the first six months of 1922. (The net after charges for the whole year 1922 was but \$4,375,373). This 1923 six-months' net was considered by the directors to be sufficiently good so that they could set aside from it the full year's 4 per cent dividend of \$2,400,000 on the preferred stock and also the appropriation of \$3,500,000 for additions and betterments, or for the retirement of funded debt as required yearly under the terms of the \$35,000,000 collateral gold loan of July 1, 1919. Further than that, the directors also decided to anticipate the appropriation of \$1,750,000, otherwise not needed to be made until the first half of 1924, to complete the total of \$17,500,000 required to be appropriated under the provisions of the 1919 loan. Out of the half-year's income there was also set aside a cash payment of \$5,000,000 required in connection with the financing of some \$22,000,000 of new equipment.

It was hardly probable that the directors would have taken such steps as they did at the June meeting had they not felt very hopeful concerning the probability that conditions would be such as to allow for a dividend disbursement before the end of the present year.

#### One-Fourth of Total Funded Debt of \$500,000,000 Matures in 1925

The question is really more involved than it has thus far been here stated. This for the reason that in 1925 the Baltimore & Ohio will be called upon to refund over \$130,000,000 of the total of \$500,000,000 of long term debt, inclusive of equipment trust certificates, which it now has outstanding. The necessity of maintaining a favorable credit position to the end that this refunding may be carried out at favorable interest rates is one of the principal reasons why the Baltimore & Ohio directors might have been led to restore the dividend on common stock. With such a dividend there is continued as a market for the refunding issues, the savings bank and trust funds of New York state and of other states which have formulated regulations similar to those established by the New York authorities. The question naturally has two sides, as was evidenced from the developments as they occurred in 1922. The important factor is the maintaining of the best credit position possible under the circumstances. Under the conditions in 1922, the directors felt that greater assistance to the road's credit was to be obtained from conservation of resources rather than in the payment of a dividend at that time.

Of the bonds which mature in 1925, the largest single issue is the \$75,000,000 of prior lien bonds issued in 1898 and carrying an interest rate of  $3\frac{1}{2}$  per cent, the interest totalling \$3,279,812 annually. The southwestern division bonds issued in 1901 total \$45,000,000, also paying  $3\frac{1}{2}$  per cent, the annual interest charges amounting to \$1,574,452. It is not likely, even under the most favorable conditions of the money market that can be expected to exist in 1925 that a rate of  $3\frac{1}{2}$  per cent can be continued in the refunding. From 1925 on, therefore, even under the best possible conditions that can be expected to exist, the Baltimore & Ohio will have to meet a substantial increase in fixed charges as a result of the refunding of the issues maturing in that year. It seems hardly necessary to emphasize that the refunding of these issues is the most important single problem now confronting the Baltimore & Ohio management. Had the uncertainty as to the general railroad situation continued this large maturity would have been approached by the security holders with considerable concern, but with the greater assurance to the railroads in the present Transportation Act and with the recent improvement in Baltimore & Ohio earnings and the essentially favorable credit position of the property a better light has been put on the situation.

#### Can Dividend Be Continued

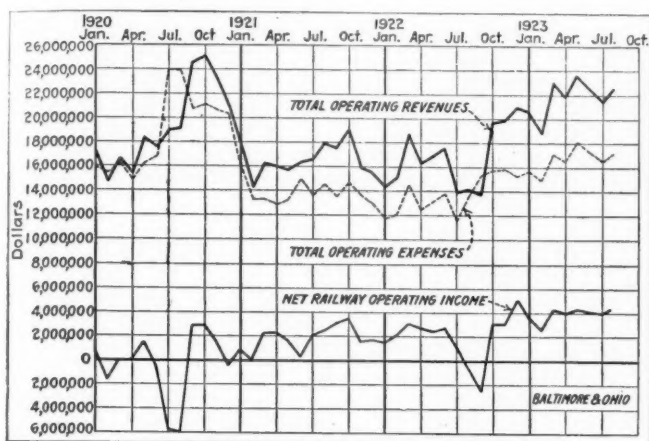
##### With Less Favorable Conditions

The question that next arises concerns the degree of success that the Baltimore & Ohio might be expected to have in maintaining a common dividend once established. Two factors are readily apparent in a consideration of this situation. One is the danger that might lie in expecting too much from the favorable earnings of the past seven months. Can such favorable net earnings be continued with a smaller volume of traffic than the road has had the good fortune to carry in the past several months? The other factor is the less favorable aspect presented in the Baltimore & Ohio's unfavorable showing in 1922.

Analysis of the traffic and earnings of the Baltimore & Ohio for the several years prior to 1922 has led some observers to take a pessimistic view of the Baltimore & Ohio's earning power. These observers point out such things as the fact that the Baltimore & Ohio revenue tons one mile in 1921 and in 1922 were less than in any year since 1915, or that 1922 surplus after allowance for preferred dividends was less than for the two preceding years, or less than the amount available after the 5 per cent common dividends in the years ending June 30, 1916, and December 31, 1916.



They note that in 1917 and 1918 deficits were reported after the common dividends. They also refer to the poor showing which the road made in various ways during and after the period of federal control. Such facts as these are, of course, pertinent and must be given due weight. Those who bear a more optimistic attitude towards the Baltimore & Ohio point out, on the other hand, that in none of the years since the beginning of federal control have conditions been normal. Because of the coal and shop strikes last year the results for 1922 were about as far from typical as they could possibly be. These observers also feel that the pessimists fail to take



Baltimore & Ohio Gross and Net

into consideration the large expenditures for physical betterment and for equipment which have been made by the Baltimore & Ohio within a comparatively recent period.

#### Normal Conditions First Met in 1922

The Baltimore & Ohio met in the first half of 1922 what might properly be termed the nearest approach to normal operating conditions which it had had the good fortune to meet for several years. The conditions, of course, were not entirely typical because this six-months' period was prior to the revival in business conditions which took place in the latter part of the year and because for three of the six months the road's large coal traffic was reduced because of the coal strike which began on April 1. Nevertheless, Baltimore & Ohio earning power was evidenced by the fact that in the first six months of 1922, the road had a net operating income of about \$14,500,000, which compared with about \$7,500,000 in the same period of 1921. The Baltimore & Ohio's annual average of pre-war net earnings was embodied in a standard return of about \$28,000,000. That the road should have succeeded in earning an amount equivalent to one-half the standard return in the first part of 1922, even with the coal strike, and in view of the fact that the larger part of Baltimore & Ohio net is ordinarily earned in the latter half of the year, speaks well for the earning power of the property as it existed at that time.

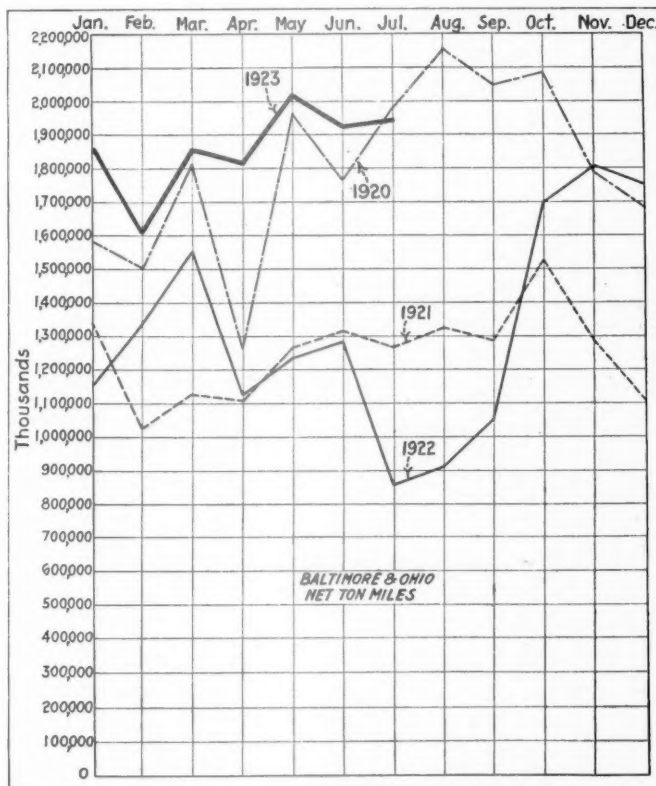
#### 1923 Earnings Extraordinarily Good

It is not exaggeration to say that the Baltimore & Ohio earnings for 1923 to date have been extremely favorable. For the first eight months of 1923, the road has reported a net railway operating income of \$30,955,742, as compared with \$15,157,172 in the first eight months of 1922, an increase of \$15,157,172. In these eight months the road, of course, handled a heavy traffic, although not as heavy as in the eight months' period of 1920, extending from April to November of that year. It is of interest that the net operating income for the first eight months of 1923 was greater than that reported in any year since the beginning of federal control and was greater than the entire standard return.

It compared with \$23,735,005 for the full year 1922 and with approximately \$22,000,000 for the full year of 1921.

#### Large Charges for Maintenance of Equipment

The most important point, however, is that during the eight months' period of 1923, there were extraordinary charges to maintenance of equipment, the total of \$44,019,704 being \$15,860,552 in excess of that for the corresponding eight months of 1922. A fair estimate would be that the charges to maintenance of equipment include additional expenses amounting to a sum somewhere between \$500,000 and \$1,000,000 per month representing the cost of the work necessary to catch up on the equipment conditions as they existed at the end of the period of federal control, or to remedy the deterioration in equipment that resulted from the adverse effects of the shopmen's strike. Taking these facts as a whole concerning the earnings of the first part of 1922 up to the beginning of the shopmen's strike, and the earnings of 1923 as they have been reported to date, there does not seem to be much room for worry concerning the Baltimore & Ohio's future. The situation as a whole would seem to indicate that the Baltimore & Ohio will have no particular difficulty in maintaining the dividend in the



The Trend of Baltimore & Ohio Traffic

future on the five per cent basis as established by the recent board of directors meeting.

There is a story of particular interest in connection with the large sums of money which the Baltimore & Ohio has had to spend this year for the maintenance of equipment expenses. The strike of the railway shopmen on the Baltimore & Ohio was especially severe as concerns the operation of the railroad, as is indicated by the sharp decline in net ton-miles which the road reported in July, August and September. The recovery from the strike, on the other hand, was very rapid. Net ton-miles in October, November and December of 1922 were nearly double those of July or August and as a result of the restoration of the coal traffic, they were 50 per cent in excess of the figures for April, May or June.

On July 1, 1922, when the shop strike began, the Baltimore & Ohio had 15.3 per cent of its cars in bad order and 26.7 per cent of its locomotives held for repairs requiring over 24 hours. The effect of the strike was shown in an increase of the percentage of unserviceable locomotives to a figure which, at its highest, reached 52.5 per cent on September 15, as has already been noted. On January 1, 1923, conditions had improved to the extent that bad order cars amounted to but 9.2 per cent and unserviceable locomotives to 28.6 per cent.

The latest report available concerning equipment conditions is that for September 1, 1923. On that date the bad order car percentage was but 4.8 and the percentage of locomotives held for repairs requiring over 24 hours was 14.8 while at the same time there were 87 locomotives stored in serviceable condition.

These percentages explain the favorable comments made in the first paragraph concerning the present excellent condition of Baltimore & Ohio cars and locomotives. The improvement which has taken place represents an extraordinary improvement in the productivity of the Baltimore & Ohio shops and it has, of course, also been influenced by the large acquisitions of new equipment and the elimination and writing off of considerable old equipment. In 1922, for example, the road acquired 30 new locomotives and 6,006 freight cars of a total value of approximately \$11,500,000, whereas in the same period it wrote off 39 locomotives and 4,662 freight train cars, the total net increase in value of equipment owned being not quite \$7,000,000. The road has acquired, since the beginning of 1923, a large quantity of additional new equipment, and as a result is showing a progressively improving equipment situation.

#### Results for Year 1922

The Baltimore & Ohio annual report issued two or three weeks ago showed a net corporate income, or net after fixed charges, of \$4,375,373, this being the final result of the favorable conditions of the first six months, the unfavorable effects of the shop strike evidenced in the three months of July, August and September, and the especially favorable results of the last quarter of the year. The net corporate income for 1921 was \$6,388,891, which was \$2,013,518 greater than the net income for 1922. One of the principal reasons for the decrease in 1922 as compared with 1921 was the inclusion of an item in the 1921 income statement of \$4,292,542 representing amounts found to relate to the guaranty period and chargeable to the government under the Transportation Act. The 1922 freight revenues of \$200,843,170 were \$1,765,316 greater than in 1921. The expenses totalling \$165,021,374 were \$2,050,719 less than 1921. The 1922 operating ratio was 82.16 and that for 1921, 83.92. The net operating income in 1922 of \$23,735,005 was \$1,793,309 in excess of the 1923 figure. Revenue tons handled during the year, amounting to \$78,565,692, were 9.77 per cent in excess of the traffic for 1921 but the total for 1922 was, with the exception of 1921, the lowest reported in any year since that ended June 30, 1915. The revenue tons on mile showed a corresponding situation. These figures for 1922 are given for such interest as they may contain. Those who feel optimistic concerning the present situation of Baltimore & Ohio, however, are inclined to emphasize that the figures reflect abnormal conditions taking the year as a whole.

THE CONSOLIDATED PURCHASING AGENCY of the American Short Line Railroad Association has compiled a directory containing contract bulletins for ready reference which shows with whom contracts have been placed and the prices named in the contracts. In addition, the directory contains advertisements of those companies dealing in railway supplies with whom it deals. The directory is designed to show the advantages of purchasing equipment and supplies through the agency.

## Report on Collision at Fowler, Colorado

THE INTERSTATE COMMERCE COMMISSION has reported on a collision on the Atchison, Topeka & Santa Fe at Fowler, Col., on August 13, when southbound passenger train No. 13, second section, collided with northbound passenger train No. 6, making a very bad wreck. The engineman, fireman and baggageman of the northbound train and the two enginemen of the southbound were killed, and 41 passengers, one express messenger, one mail clerk, one news agent and four employees were injured. The locomotives remained upright but were badly damaged; and the front portions of both trains were wrecked. The fourth car in the southbound train was destroyed.

The southbound train was No. 609 of the Colorado & Southern, being run over the Santa Fe road from Pueblo to Trinidad because of washouts on its own line. It was drawn by two locomotives, the leading one being manned by a Santa Fe crew; Engineman Schmanke and Fireman Heath. This train overran the meeting point. It was running on an order saying that it was to meet the northbound at Hamlet instead of Elder; and both engineman and fireman, reading this order, called "Hamlet" "Fowler."

The manual block system is in use on this section of road, but the trains were to meet at a non-telegraph station and were each running on a permissive card. They met at speeds between 30 and 40 miles an hour. The orders were on Form 19. Engineman Schmanke read the order and then said to the fireman "We meet them at Fowler," and gave the order to the fireman; the fireman then read it the same way. He said that the engineman's remark to him was not the cause of his making the mistake in reading; he could not explain the mistake. The engineman's copy of the order, when found, was illegible, but the other copies were legible, leading to the conclusion that the engineman's copy had also been legible. It had been partly obliterated while in his pocket, when the crash occurred.

Fireman Heath did not see either the permissive card or the clearance card. Heath, on first seeing the headlight of No. 6, thought it was an automobile light; and he only realized the true situation when the trains were perhaps a quarter of a mile apart. The collision occurred at 4:32 a. m., about one-half mile north of Fowler.

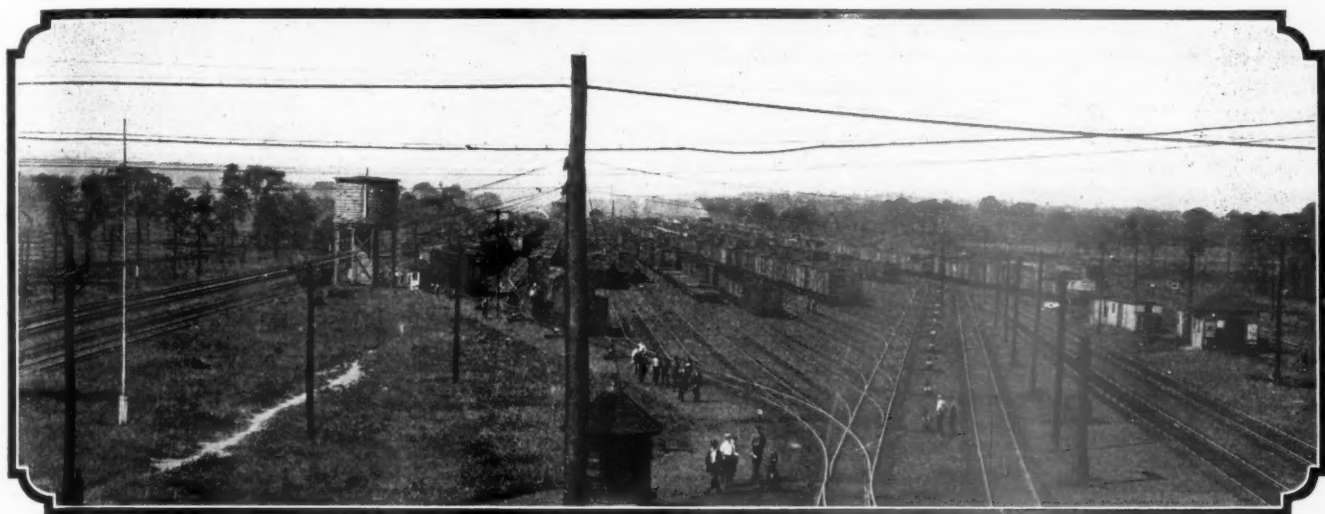
The conductor of the southbound train, leaving Nepeshta, where the meeting order was received, calculated that about 4½ minutes would be required to make the run to Hamlet; he says that he listened for the whistle signal indicating the approach to Hamlet, but after waiting a minute or two beyond the calculated time, he became uneasy and he pulled the air cord; but no whistle was given in response and he pulled the cord again; then he looked out; but No. 6 was then approaching and, although he pulled the conductor's valve, it was too late.

The copies of the train order were delivered to this train by means of hoops. The fireman of the second engine received the order and gave it to the engineman but the engineman did not give it back to him nor did he say what the order contained. Both firemen said that they had not noticed any signal sounded on the air whistle.

The inspector places the responsibility on Engineman Schmanke and Fireman Heath. "It is difficult to assign any reason why both engineman and fireman failed to read the order correctly. \* \* \* Had an adequate automatic train control system been in use, this accident undoubtedly would not have occurred."

The Netherlands Air Craft Company is planning to establish passenger and freight air service between Chicago and Cleveland in January, 1924. Similar lines are proposed later, between Cleveland, Detroit, Chicago and St. Louis.





## Ways to Move More Traffic Over a Line

Several Railway Men Describe Methods by Which Capacity Can Be Increased

**I**NTENSIVE SUPERVISION and team work will do much to increase the amount of traffic which the railways can handle and will enable them to cope with the unprecedented business during the next few weeks. In the papers which follow a number of railway men present valuable suggestions regarding simple expedients which will eliminate delays. These articles supplement others received in the contest on Means of Increasing the Capacity of a Line, which were published in the *Railway Age* of September 16, page 463, and September 29, page 564.

### Help Crews Get Over the Road

By S. J. Murrow

Relief Dispatcher, Central of Georgia, Savannah, Ga.

The car miles per day performance should be posted at frequent intervals and the "men on the job" should be given all the information concerning operating statistics that they care to and will absorb. All of the cards should be laid on the table at fuel meetings and other gatherings. Assume that the men outside are interested, for they will be.

Train movements can be quickened to a great extent by the dispatchers, who are in position to see and take advantage of local conditions. A knowledge of the power, the layout of tracks and switches at stations, the grades and the positions of signals are necessary and these men should be required to make frequent trips over the line. Train and enginemen should know that the dispatchers and division officers are watching their performance and are willing and ready to assist them in every way when on the road.

Instructions should be as flexible as possible to bring results, leaving their actual carrying out to good judgment and local conditions. The results obtained should be the measuring stick. When commendation is in order give it and when criticism is in order do not be sparing with it, either.

Trains on the line should not be allowed to skip tonnage, but such tonnage should be ready at the junctions, so arranged as to avoid switching while picking up. Special cars for which tracers are out are a hindrance and if care and judgment are exercised, tracer messages can be largely elimi-

nated, as it will be unnecessary to trace any particular car when each car is given prompt movement over each division.

The overloading of trains not only tends to cause congestion and unnecessary delays at meeting or passing points, but retards the movement of cars other than those in trains, creates bad order cars, delays opposing trains, wears out crews and constitutes one of the worse morale-killers ever devised. Crews handling trains overloaded trip after trip, get the habit of delaying and takes less interest in getting their trains over the road, and there is a general slackening up all along the line. On the other hand, if each engine is given what it can handle and makes its schedule during the peak of the movement, the men are in better shape mentally and physically to handle the business more promptly. The majority of them want to get over the road, some opinion to the contrary notwithstanding.

### Intensive Supervision Will Help

By R. J. Littlefield

Trainmaster, Boston & Maine, Fitchburg, Mass.

Operating forces cannot overestimate the importance of furnishing power and crews promptly for trains ready to move. It happens too frequently that no special effort is made to reduce the number of cars waiting movement until a yard is congested, the regular classification work interrupted and the yardmaster unable to receive trains without delay.

In France the writer saw the Transportation Corps spend three to five dollars to produce a transportation unit which would not have cost over one dollar under normal conditions. The same principle applies to our congested yards. While our yard operating costs may not show all expenses resulting from a congested condition of yards, we cannot overlook the serious delays to trains, the increase in road overtime, the slow delivery of freight, the dissatisfaction of patrons, the difficulty of forwarding cars in their proper order with the resulting claims, and the failure to get equipment released and returned promptly, all of which are the direct results of bad yard conditions.

Staff meetings should, from time to time, be devoted largely to better car movement and a campaign to keep the

number of in-transit cars at the lowest possible figure consistent with operating conditions. Chief train dispatchers must appreciate the importance of keeping a finger on the "pulse" of the division and should be the first to note a slowing up of car movement. Yardmasters and dispatching forces should understand each other's problems and exchange ideas freely at staff meetings. Chief dispatchers should be in a position to press the yard forces to have trains ready for power and crews, rather than to have yard forces pressing the chief dispatcher and superintendent to protect cars awaiting movement.

Master mechanics and their local supervisory forces should attend staff meetings devoted to speeding up car movements. This department hears too little of the serious consequences which result when congestion is not avoided or cleared promptly. Conferences accomplish favorable results if there is a free exchange of ideas.

Yards which continually start freight trains late are not aiding in developing the greatest capacity of the line. A campaign was made to reduce terminal delay at an important yard where from 850 to 1,000 cars were received daily during heavy business. At first weekly statements in condensed form were circulated among yardmasters, towermen, engine-house foremen and crew and engine dispatchers, with copies to the superintendent and master mechanic, showing the average delay to all freights originating at that yard, classified between power late, train not ready, crew late, air trouble, superior trains, and miscellaneous causes. Specific delays were investigated promptly. Later the same report was distributed daily, showing the performance of all trains started during the previous 24 hours. Although engine crews went on duty only 45 min. and train crews 30 min. prior to the time they were scheduled to depart with their train, and all crews were obliged to make an air brake test, get seal records and car numbers, the average delay to all freights including locals for three months was 14.9 minutes per train. In one or two cases the average initial terminal delay was below 10 minutes per train for a seven-day period.

Freight trains need close supervision on the road as well as at initial terminals. It is frequently found that enginemen on through freights stop at more water stations than necessary. Every unnecessary stop decreases the line capacity.

## Precautions to Avoid Embargoes

By C. J. Brown

Acting Assistant Superintendent, Missouri Pacific, Sedalia, Mo

The so-called temporary restraining orders at large junction terminals should be eliminated. If a railroad is unable to accept all freight offered for three successive days, a formal embargo should be placed, and loads on line for the road embargoed at the time the embargo is placed should be held at the first intermediate terminal moved into, instead of permitting distant divisions to crowd them into the objective terminal, in order that re-routing and reconsigning may be arranged for. Let the embargoed loads be spread over a considerable portion of the system, rather than attempting to move them into the junction terminal, or handicapping divisions immediately adjacent, which are almost invariably heavy operating divisions, by blocking sidings with embargoed business. Also, work out plans now for the movement of a certain number of loads each 24 hours via junction points short of the congested junction terminal. By having a thorough understanding as to the amount of business connecting roads are able to handle at such points, and making the necessary arrangements in advance, the movement will be greatly facilitated when the emergency arises. Experience during previous periods of congestion has taught us the junction terminals and lines that we may expect to clog up first.

## Speeding Up the Individual Car

By C. K. Miller

Assistant to General Traffic Manager, Gulf Companies, Pittsburgh, Pa.

To increase the capacity of a line, decrease the time traffic remains on the line. A line handling its capacity at an average speed of 10 miles per hour would be able to handle 50 per cent more business if the speed were increased to 15 miles per hour. This speeding up need not be done in the movement of trains, as there is abundant room for this improvement in the placing of cars for unloading, the movement of loads as soon as ready and the movement of empties as soon as unloaded.

Railroad equipment does not earn anything standing still; therefore, the speeding up of traffic reduces this loss and increases the earnings of the equipment and at the same time increases the carrying capacity of the line. Equipment made empty in a terminal today should be well on its way in the direction of empty movement by tomorrow morning. Such equipment should not be held for prospective loading tomorrow. Let tomorrow take up the equipment moving 12 hours later. It usually does not cost as much to move a car as soon as it is ready to go as it does a day or two later after the car has become buried.

A value in dollars should be set on idle days of various classes of equipment and the equipment handled on this basis. If a car is worth from \$2 to \$5 per day, as is claimed by demurrage rules, a terminal management could easily determine whether it is more economical to spend a few dollars for switch engine service and gain in revenue.

It often takes longer to place a car for unloading after arrival at destination than it does to move it two or three hundred miles from point of shipment to destination. These slow movements cause congestion and slow down other traffic; they also tend to make consignees sluggish in handling their freight, while snappy movements soon influence shippers and consignees to speed up also.

The immediate notice to consignees of the arrival of their freight would be of great benefit in speeding up traffic. A specially designed post card, carrying information as to arrival, contents, etc., made from waybills and mailed to consignees from yard offices *immediately upon the arrival of carload freight* will speed up unloading.

## Co-operation Will Effect Marked Improvement

By L. F. Jagger

Conductor, Chicago, Burlington & Quincy, Holdrege, Nebr.

Few lines are so perfectly laid out that they can not be improved by changing a switch here and there and thus enable a crew to utilize waiting time to good advantage. In yards where a great deal of setting out and picking up occurs much valuable time is lost because the entrance to the yard does not have a switching lead holding about twenty cars. A lead of this length would enable a train to do all of its switching and be ready to go on the arrival of the expected train, instead of having all of its work to do after this train comes. A conductor may tell the dispatcher that he will be ready to go on the arrival of a certain train and be cleared and go to the other end of the yard, where he finds his fill buried deep. Not knowing just where the expected train is he stays in the clear until the train arrives and then does his work. If the dispatcher is figuring a close meet this probably results in a delay to more than the two trains directly involved. Lack of a good runway of about two hundred feet leading to a switch also frequently holds a train back a station because the brakeman, knowing the condition of the



approach to the switch, has told the engineer that he cannot get the switch without stopping the train.

The most important factor in any undertaking of this kind is the human element. All of the latest and most improved methods known can be adopted but without the co-operation of the workers they will not help much. Co-operation to its fullest extent is only secured by men working together with an understanding of each other's problems. At the present time there is too much cross-pulling between the various departments and within the departments themselves. Each one seems to be on the lookout for his particular work and loses sight of the common goal. Meetings could be held at frequent intervals, so arranged that every employee would have a chance to be there, in which an explanation of the situation would be made in clear terms so that each man would know just what was expected of him. These meetings will give everyone an insight of what the other fellow is up against and create a better understanding all around.

A "thank you" for a good piece of work, even if it is line of duty, from one's superior officer is more highly appreciated than one might imagine. At any rate it costs nothing and if it instills a more friendly feeling between the officer and the employee a big step has been taken in the direction to increase the capacity of the line.

A campaign of this character would have a tendency to eliminate such incidents as car inspectors bad-ordering cars for minor defects after trains have been switched because they were on the outs with the switchmen. And I expect that drawbars have been pulled out so that car men would have the pleasure of putting chains on them. Such things are hard to prove but nevertheless they happen.

Passenger trains with fast schedules, running late, are a source of much delay, especially if the dispatcher has been called on the carpet recently for holding up a passenger train with a "run late." Close study of the men on the engines, the kind of power, the size of train and weather conditions, should enable a dispatcher to figure a "run late" or a wait very close. At any rate there is room for vast improvement in this particular item.

## Eliminating Delays to Grain Cars

By R. R. White

Clerk to Chief Dispatcher, Chicago, Milwaukee & St. Paul, Spokane, Wash.

Inspectors and repair men at many repair and inspection points are more or less negligent in their work, as a result of which cars are often moved to loading points which are not suitable. It is then necessary to back-haul them to a repair point, or to send them to other territory for rough freight loading. Much of this inefficiency could be eliminated if the cars were given a second and more rigid inspection, and if after being recoopered any defects remaining were again called to the attention of the repair men. In some instances where grain is being shipped in bulk it is also possible for the agents to repair cars by the use of a little building paper or reliners and a few tacks.

Agents at stations where shippers are taking the full free time limit for loading a car can frequently show them the advantage of loading cars in the shortest possible time. The agents can also enlist the co-operation of shippers in loading their cars to their maximum capacity.

In handling grain cars, if the air is applied to the brakes too quickly it will frequently cause the grain to bulge the body of a car at a weak point and start the car leaking, making it necessary to set it on the repair track and lose from 6 to 24 hours in its movement.

The agent at final destination, in co-operation with the chief dispatcher, should be able to obtain reports of the number of cars of grain in trains and the consignee of each, at

least three or four hours in advance of their arrival and in this way arrange for them to be placed at the various unloading and inspection points with the minimum delay. This also enables the agent to advise the consignee almost the exact time the car will be delivered. In this way the consignee can arrange to unload and release the cars with the least delay.

## How One Situation Was Improved

By E. C. Goodnow

Trainmaster, Boston & Maine, Greenfield, Mass.

The main artery of the Boston & Maine from the west is the Fitchburg railroad, now operated as the Berkshire and Fitchburg divisions of the system. These divisions extend from Rotterdam Junction, N. Y., to Boston, Mass., a distance of 212 miles. Modern freight terminals have been constructed at Rotterdam and Mechanicville, N. Y., and East Deerfield, Mass. The heavy east bound freight traffic comes onto the line at Rotterdam and Mechanicville.

Before the B. & M. took over the Fitchburg, a car entering the Rotterdam or Mechanicville gateway destined to a point on the B. & M. such as Springfield, Worcester, or Salem, Mass., would be handled by from three to seven different train crews and reswitched a corresponding number of times at the various yards enroute. Most of these yards were inspection points where car inspection and repair forces were maintained.

Under this method of operation the capacity of the line was restricted by the short hauls, the rehandling and reswitching of cars and the delays caused by having so many inspection and repair points and getting started out of the various yards.

Under the B. & M. management, this territory was separated into two operating divisions instead of three and east bound cars are grouped at Mechanicville, N. Y., into solid trains, which trains move through to destination without re-switching, and are handled by not more than two train crews in any instance.

A careful inspection is made of all cars entering the western gateways and those in need of repairs are switched to repair tracks during the process of classification. Every possible precaution is taken to prevent a bad order car getting by so that it is seldom that trains are broken up during their trip to set out crippled cars.

## Excerpts From Other Papers

The co-operation of dispatchers, train and enginemen, roundhouse forces, yardmen, carmen and other employees should be solicited. It has been my experience that it will be given freely if the employees have confidence in the solicitor. Officers should visit the men as frequently as possible and display a sympathetic interest in their work and correct abuses that may exist.

If the men are enthused with the idea that they are an important part of the road they will do much with no addition to capital account.—By G. T. Lewis, Chief Dispatcher, Missouri Pacific, Jefferson City, Mo.

"Today's business this morning," is a good motto for any terminal—Place carload shipments early in the day—Get patrons to bill cars out early and move them promptly. Since it has been admitted that a division is no stronger than its terminals, I believe that a man should be placed in charge of all yards and terminals in a given territory or district. That man should be an organizer, capable of getting yard work done in a uniform method. He should be held responsible for proper classification, the prompt movement of trains in and out of yards, etc. Division officers are not able to spend the time in terminals that they should and would like to. Yards handled as a unit will increase the

capacity of a line.—By W. F. Cooper, Superintendent Terminals, Southern, Salisbury, N. C.

Do not overload the dispatcher. The dispatcher should at all times work the job, and not the job work the dispatcher. It should not be necessary for trainmen to have to ask for help on other trains; the dispatcher should have orders placed and waiting to avoid such delays. One hour's overtime for a train and engine crew with the fuel consumed will pay the salary of a dispatcher for a day.—By C. L. Sauls, Trainmaster, Seaboard Air Line, Hamlet, N. C.

It has been my sad experience to have too many inspection points. I believe the reason for this is that on many railways there is a division of responsibility between the operating and the mechanical heads of the division. Some uniform practice should be adopted that will make it unnecessary to inspect cars enroute, for this slows up movement. For instance, a car received from a western line in Chicago is inspected by that line upon delivery on the interchange track. The belt line also inspects it and the receiving line will then inspect the car. In many instances this car will have had three complete inspections not only for any necessary running repairs but for operating defects and safety appliances within less than twelve hours. After the car has received all this attention, and no doubt been watched in a measure by the trainmen, it will again come under delay of the blue flag at the first division point out of Chicago. There should be such honesty of purpose and understanding between railways as would make a large part of this unnecessary. In many instances more inspectors are located at a point to inspect cars than there are men to repair them.—By G. J. Derbyshire, General Superintendent, Chesapeake & Ohio, Peru, Ind.

## Hearing on Clinchfield Lease

WASHINGTON, D. C.

**T**HE HEARING on the application of the Louisville & Nashville and Atlantic Coast Line for authority to lease the Carolina, Clinchfield & Ohio, before Director Charles D. Mahaffie of the Interstate Commerce Commission's Bureau of Finance, was concluded on September 29, the last three days having been devoted largely to testimony in opposition to the lease.

Charles R. Capps, vice-president in charge of traffic of the Seaboard Air Line, was cross-examined by George B. Elliott, vice-president and general counsel of the Atlantic Coast Line, who said the opposition of the Seaboard was apparently based on the idea that the Coast Line would not give the Seaboard a fair deal in the routing of traffic. After some argument about the interpretation of the words "fair deal" to show that nothing improper was implied Mr. Capps asserted that that was one of the important reasons, saying he thought it would not be so impartial toward the Seaboard as toward the Chesapeake & Ohio, for example.

John Skelton Williams, formerly president of the Seaboard Air Line and now receiver of the Georgia & Florida, and chairman of the Richmond Trust Company, opposed the lease unless the commission would attach conditions allowing the Seaboard and Southern and the Norfolk & Western and the Chesapeake & Ohio if they should desire, to participate on equal terms. The public interest requires, he said, that the Clinchfield route over the mountains should remain an open highway or bridge route, similar to that of the Richmond, Fredericksburg & Potomac between Washington and Richmond. Incidentally, but only secondarily to his interest in the public welfare, Mr. Williams said, the Georgia & Florida would like to build from Augusta to Greenwood and thence gain an outlet to the north via the Piedmont & Northern, the Seaboard and the C. C. & O. Mr. Williams told of his

various experiences in the development of the Seaboard system and how he had forced a participation in the ownership of the Richmond-Washington line, then held by the Pennsylvania and the A. C. L., for the Seaboard and other roads; also of the attempt of the Seaboard interests to gain control of the L. & N. After this failed and the controlling stock had been acquired by Morgan & Co., he had insisted that the other roads be allowed to participate but Morgan had turned it over to the A. C. L.

### Early Interest of Seaboard in Clinchfield

He then told of the early interest of the Seaboard in the construction of the C. C. & O. by friendly interests, but said that after the Seaboard had emerged from receivership and it was proposed to have the Seaboard lease the line he had some doubt as to whether it should take on the obligation. Then the C. C. & O. was not earning as much as the proposed rental, he said, whereas now it is earning over a million a year above fixed charges; therefore, he could see no inconsistency in his attitude then and now. As soon as he had read in the papers of the proposed lease he had sent a telegram, followed by a long letter, to the commission protesting against it as detrimental to the public interest unless other roads were allowed to participate. The opportunity is now at hand, he said, for a solution to the problem of control of the C. C. & O. similar to that of the Richmond, Fredericksburg & Potomac, but to grant the application would serve to perpetuate or create a monopoly of the last feasible route across the mountains. When Director Mahaffie asked if he would prefer that the connecting lines be allowed to participate in the lease to leaving the Clinchfield independent, Mr. Williams said there were some advantages in having a joint control of independent systems because some that are alleged to be independent are not so in fact. He saw no great importance in the new route for merchandise but thought that access to the Kentucky coal fields from the South would be desirable "if it does not cost the public too much."

J. S. Cureton, general freight and passenger agent of the Piedmont Northern, opposed the proposed lease on the ground that the additional coal supply is not needed in the Southeast.

John P. Grace, mayor of Charleston, S. C., said that the proposed lease would be injurious to Charleston and the whole Southeast unless the commission should attach conditions safeguarding the right of all roads to participate in it as a bridge route and also requiring the carrying out of the original plans of the C. C. & O. to enter the city of Charleston and develop a coal terminal for export there. Between 1911 and 1915, as mayor, he had participated in negotiations with M. W. Potter, then president of the Clinchfield, and his associates, as a result of which the city had acquired a right of way through the city for the road to its water front properties where it had promised to erect a modern coal terminal and make Charleston the great port of the Southeast. The other roads also turned their attention in the same direction and the C. C. & O. had let contracts and begun work, but it was suddenly stopped at the time the war broke out, because, he was told, of the difficulty of financing it and because the Clinchfield Coal Corporation changed its mind about assisting in the financing after the Southern had offered it facilities at Charleston. He considered that the Clinchfield is morally obligated to the city, which still holds the right of way which reverted to it when the work was stopped, and would still be glad to convey it back to the road.

THE MISSOURI STATE TAX COMMISSION on August 30 recommended that the valuation of all railroads and public utilities in Missouri be assessed for 1923 taxation at \$385,632,658, an increase of \$2,369,025 over the value finally fixed by the State Board of Equalization in 1922.



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# Public Benefit From More Railroad Freedom\*

## Private Management Under Constructive Regulation Will Best Promote Interests of Both Employees and the People

By Ralph Budd  
President, Great Northern Railway

**T**HERE HAVE BEEN THREE distinct periods with respect to railroad regulation and public relations: First, prior to 1887 railroad enterprise was on a strictly commercial basis and railroad promotion and growth proceeded with great rapidity and unbridled competition except for state laws. Perhaps some things were done in those days which no one would advocate at the present time and under present conditions, but in a large way it seems certain that the country could not in any other possible manner have secured the great benefits which were so essential to its growth and development at that time as it did from this uncontrolled promotion of railroad enterprise.

The next period, 1887 to 1917, marks the beginning of federal regulation and witnesses rapid increase in regulation of railroads under the Interstate Commerce Commission. It is significant that during this period more and more regulations and restrictions were placed about railroad operation with the result that it became more and more difficult to provide service for the rapidly growing needs of the country. By 1914 it had become almost impossible to successfully finance railroad projects. On account of the increasing difficulty of regulating the many companies, all of unequal strength and earning ability, the need of a change in public policy was recognized, and Congress began a most comprehensive study of the transportation problem in 1915. There was also a growing cry for solving the problem by resorting to government ownership and operation. The intervention of the war, which resulted in taking over the railroads by the government as a war measure, at the end of 1917, and operating them under government direction until March, 1920, gave an opportunity to observe and experience government operation of railroads without actual purchase or lease as an economic proposition in peace times. The result of this period of so called federal control was an almost universal demand that the roads be returned to private operation. After a continuation of the study which was begun before the war and after the most careful study ever given the subject, a new law called "The Transportation Act 1920" was passed and became effective March 1, 1920. Since then the railroads have operated according to its provisions. This marks what might be called the third epoch in railroad regulation.

### The Transportation Act, 1920

There were many things about this law which did not suit the railroad managements, but it contains some fundamental provisions which should appeal to all fair-minded people and which should be considered carefully before condemning it.

Probably the most important of these is that which makes it the affirmative duty of the Interstate Commerce Commission to fix rates which will enable the railroads as a whole or in territorial groups to earn a fair return upon the value of their properties used for transportation purposes. This provision has been seized upon by many critics who say it constitutes a guaranty of earnings to the railroads. It is likely that in the routine of your work, as well as in your social and civic relationships outside of office hours, the

most common complaint you encounter is that the government guarantees the earnings of the railroads. Perhaps the most conclusive brief answer to this criticism is that since the law has become effective the railroads have fallen very far short of earning what the Interstate Commerce Commission fixed as a fair return upon the value of their properties, and if there is in fact a guaranty of earnings, the government owes the railroads a huge sum of money. No railroad company has ever claimed that the government owed it anything on account of this alleged guaranty and when it comes to this point even the most rampant radical does not admit the debt on the part of the government.

It has always been the duty of the Interstate Commerce Commission to permit the railroads to charge high enough rates to pay their operating expenses and, in addition, to allow a fair return upon the value of the property used for transportation purposes. It would be contrary to the Constitution of the United States to undertake to compel the railroads to furnish service at less remunerative rates. During the past 20 years, however, it has become so commonly the accepted province of regulatory bodies to consider only rate reductions without regard to consequences, that some such provision as the Transportation Act contains seems necessary to arrest this mistaken tendency. Recognition of the fact that it is in the real public interest to give the railroads sufficient return to insure an adequate service is one of the outstanding features of the Transportation Act. The provision that rates which will make it possible for the railroads as a whole or by groups to earn a fair return upon the value of their property does not apply to any one railroad and if any railroad fails to make such earnings it has no recourse whatever. On the other hand, if any single railroad should earn more than a fair return, the law provides that it shall pay one-half of such excess to the government.

### Northwestern Railroads' Net Earnings Poor

During recent months there has been the greatest discrepancy between the net earnings of the railroads in the various regions of the country. In the eastern part of the United States they have been fairly satisfactory, while in the west, and particularly in the northwest, they have been very poor. Indeed, during the first six months of 1923 the net earnings of the railroads in the northwestern part of the United States were at the rate of only about 2 per cent per annum on the value of their properties used for transportation purposes. Whether there were any Transportation Act or not, the railroads of the northwestern part of the United States are entitled to more net earnings than they are now making, and people in the territory served by these railroads cannot afford to continue for long without allowing more remunerative rates to the railroads which serve them. Such a condition is certain to be reflected sooner or later in an inadequate and unsatisfactory service, which is far more costly to the shippers than would be the cost of rates sufficient to insure adequate service.

The reason for the very unsatisfactory net returns of the railroads in the northwest is that those railroads serve, to quite a large extent, an agricultural population, and in an endeavor to alleviate the distressful condition of the farmers in their territory, the railroads' rates have been advanced

\*From an address delivered at the annual convention of the American Association of Railroad Ticket Agents at Portland, Ore., on September 13.

very much less than they have in other sections. For instance, the average rate in the northwestern region is about 40 per cent higher than it was 10 years ago, while the average rate in the eastern region is about 80 per cent higher than it was 10 years ago. In both regions wages and the cost of fuel and many other materials entering into the cost of operation have advanced over 100 per cent. Taxes have also more than doubled: In short, the railroads of the northwest are suffering from the very same economic conditions as the farmers in that region who are leading the attack upon the railroads. Both the farmers and the railroads pay too much for what they buy considering the prices they get for what they sell.

It seems singular that the very section of the United States where the railroads have contributed most to alleviate conditions and where they themselves are suffering from the same troubles as the other principal industry, namely, farming, is the section where the railroads are being subjected to the bitterest attack and the greatest clamor for lower rates regardless of consequences. But after all, this is not so difficult to understand. The reason lies in the fact that in moments of misfortune it is easy for politicians and others moved by selfish interests to persuade the farmers that someone or something is to blame, and the railroads being considered a more or less impersonal agency and one which touches the activities of every industry, have been an easy victim of attack.

#### I. C. C. Valuation Shows No Watered Stock

Almost inseparably linked with the charge of guaranty is that of overcapitalization, or watered stock. It is claimed that the valuation upon which the railroads are entitled to earn a fair return is more than they are worth. For many years prior to 1913 it was the cry of railroad critics that a physical valuation of the railroads would disclose gross overcapitalization. Under the leadership of Senator La Follette a law was passed in 1913 which directed the Interstate Commerce Commission to make such a valuation. Accordingly the Interstate Commerce Commission has been at work for the past nine years and its valuation of the railroads is now nearing completion, approximately \$90,000,000 having been expended on this work. The result shows that the railroads are not overcapitalized, but are undercapitalized. The practice followed on most railroads for many years past has been to "plow" back into the property large amounts each year without capitalizing them. The result of this practice has been to more than offset any stock that was issued originally without being paid for at par.

Seeking a new line of attack, it is now claimed that the physical valuation is not a proper test, but that the railroads are worth what they are selling for on the market. There are a great many reasons why this is not a proper means of determining the value of the railroads. It is necessary only to point out a few of these reasons.

One is the assumption that the price at which an almost infinitesimal percentage of the bonds and shares of stock may change hands on the stock exchange is a fair index of the price at which all the stocks and bonds could be bought and sold. The shares of stock and the bonds bought and sold on the stock exchange will be found to represent an exceedingly small percentage of the total, because the great bulk of the stocks and bonds are held by persons who are not trying to sell them and who are not tempted to sell them by the prices which are offered. To illustrate, the Great Northern has 2,495,000 shares of stock. Perhaps on a given day on the stock exchange 1,000 of these shares may be sold; perhaps in the course of a month or a year a great many thousands of shares will be sold, but in all probability to a very large extent these are the same shares which are being sold over and over again, and the great body of the 45,000 shareholders of the Great Northern are not participating at all in

those purchases and sales because they do not wish to sell and are not tempted to sell by the prices offered. It would be very unjust to this great majority of owners if the value of their property were to be fixed by this action of a comparatively few who are buying and selling probably because of some passing condition.

The manner in which the railroads are being regulated and the indicated trend of future regulation have a very great influence upon the market price of railroad securities. Actual or threatened regulation which does or would make the net return unsatisfactory will force the market price downward. If such depressed market prices are used as a measure of value for making future rates, the inadequate rates resulting will necessarily cause a further depression which, in turn, will justify still lower rates, establishing a vicious circle which would steadily force the market price of railroad securities downward until eventually it would reach zero, and according to this theory the railroads would have no value.

It should be understood and always kept in mind that the value which is to be used for fixing rates is that of the railroad property used for transportation purposes and has no relation whatsoever to the issues of stocks and bonds outstanding against the property. If a railroad had no bonds and but a single share of stock owned by an individual, it would be valued in exactly the same manner as if it had enormous issues of stocks and bonds. Of course, there will be disputed items as the railroads have every right to insist upon full consideration being given to every element of value, but one thing is certain, and that is that the Interstate Commerce Commission would not so reduce rates as to depress the market value of stocks and then assign a low value because of such depression.

Radical politicians claim that railroad rates since the end of federal control, March, 1920, would have been lower but for the high valuation placed upon the railroads by the Interstate Commerce Commission. So far as the earnings of the railroads since that time are concerned, they have fallen far short of a fair return even upon the greatly reduced valuation which these radical politicians claim, so that if the rates since 1920 had been such as to give a fair return even on the low valuation contended for, they would have been higher instead of lower than they were during that period.

#### Private Ownership and Operation

##### Best for Employees and Public

Notwithstanding the fact that government operation of the railroads during the war was unsatisfactory because of poor service and high costs, there are some who now advocate government ownership and operation of the railroads. Others who do not advocate it directly, but who propose arbitrary reductions in the valuation of the railroads and arbitrary lowering of the rates are aiding in the move to bring it about, because such action would tend to make the continuation of private operation impossible. Prominent among those who are hostile to private ownership and management are some labor leaders and public men who hold out to their constituents higher wages on the one hand and lower rates on the other hand. The inconsistency of these promises is apparent to anyone who gives it thought. There is no warrant in the experience of government operation of railroads in this country or in any other country that the expected results would come to either class. There is every reason to believe both classes would be disappointed.

Besides actual figures showing that wages have been higher under private operation since the end of federal control than they were during the so-called federal control period, the further general fact that in times of peace government service is not particularly remunerative, nor especially desirable from the standpoint of rules and working conditions, is evidenced in the familiar cases of the employees of the post office department and railway mail service. It is a far safer and



saner policy for the conscientious railroad employee who desires to be secure in his employment and sure of recognition for his ability and for service well rendered to advance in every possible way the interests of the company for which he works, so that the success of private operation will be assured and so that the company will have the ability as well as the desire to give him material consideration. The opportunity for advancement and improvement of men like yourselves who are possessed of a high order of personal initiative and whose duties require the development, to a high degree, of courtesy to the patrons, loyalty to the companies for whom you work—in short, of salesmanship ability—will certainly be much greater under private operation which will preserve competition than under government operation which would eliminate it. The public has a right to and does demand these things which it can get only with private operation.

Politicians who advocate government control are not specific in the advantages they hold out to the public, but it must be inferred that they expect great reductions in rates would follow. If we take into consideration the large deficit which was incurred and also the taxes which are paid by the railroads and compare the net amount that the public paid for its railroad transportation in the last six months of government operation, which ended on March 1, 1920, and the last strictly comparable period for which we have statistics, namely, the period of six months ending March 1, 1923, we find that the cost for the six months of federal control was \$3,118,000,000, while for the six months of private control it was \$2,883,000,000, or a saving of \$235,000,000 under private management, although during the period of private operation the railroads handled a larger business than they did during the six months of government operation referred to.

We are, then, confronted by two surprising facts of great importance: One of these is that it is represented to the railroad employees that they are being paid lower wages under private management than were paid under government management, when the fact is they are being paid higher wages. The other is that representations are being made to the public that it is paying more for its railroad transportation than it did, or would, under government operation when, in fact, it is paying less for it than it did during the closing months of government operation. The question naturally will be raised as to how it is possible for the railroads to pay a higher average wage than they did under government operation and at the same time charge the public relatively less for its transportation service. The answer is that the railroads are being more economically operated and that the net return upon the value of the railroad properties being used for transportation purposes is inadequate. In other words, private operation is now being carried on to the very great advantage of the public and the employees, but at considerable sacrifice to the owners.

From the standpoint of the public, there are many other serious objections to government ownership besides the fact that the cost of transportation would be higher than it is under private operation: One is the large public debt that would be created in making the purchase; another is that the same high standard of service could not be expected; and another that the management of the railroads would become political issues resulting in inefficiency, extravagance, and local favoritism. To keep abreast of the growing needs of the country not much less than one billion dollars annually needs to be spent on the railroads for several years. To raise this sum annually would mean a huge burden of taxation and to determine the manner and places in which it will be spent inescapably would lead to political maneuvering on a vast scale. Doubtless these disadvantages are recognized by the public generally as many of them developed during the short period of federal control. Doubtless they had impressed

themselves upon the public mind causing public opinion to declare so strongly against government ownership and operation in 1920.

### Freedom from Hampering Legislation Needed

The question after all is how to insure the public that the railroad system of the country will be able to give the greatest amount of service when needed and at the minimum cost consistent with safety. The so-called "service at cost" system offers the most that can be had, but two things should be considered in this connection: First, since the service is to be obtained at cost every effort should be made to leave the railroad managements unhampered in their business so they may reduce their costs and thus the transportation bill of the public; and, second, there must be included in the cost a fair revenue for the use of the railroad property. It is not inconsistent with the intent of the Transportation Act to give consideration to both of these things in administering railroad regulation under that law. There has been and is, however, a strong tendency towards the enactment of laws which will tend greatly to increase the cost of operating the railroads, and thus far since 1920 the net revenues which the railroads have been permitted to earn have fallen far short of returning a fair revenue upon the value of the properties.

Under the existing conditions, the managements of the railroads representing the owners, are showing rare courage and rare faith in the ultimate fairness of the American public by continuing to make further enlargements and improvements to their properties so that better service may be rendered at still lower cost. With the co-operation of the employees and the natural growth of this great country, they believe that their conditions will improve steadily until the entire success and superiority of private operation with government regulation will be fully realized. The one and only sure way for the public to help reduce the transportation bill of the country is to help the railroads produce transportation cheaper. The greatest aid to the accomplishment of this, aside from the loyal devotion of the great mass of railroad employees, is freedom from further restrictive and inhibitory legislation, and more liberal administration of the present laws.

## A Smaller Amount of Timber Treated in 1922

THE AMOUNT OF WOOD TREATED in 1922 was 17 per cent less than that of the previous year. Measured in cubic feet, the quantity treated declined from 201,643,228 in 1921 to 166,620,347 in 1922. This decrease occurred in spite of the fact that the number of wood preserving plants in operation increased from 122 in 1921 to 128 last year. This result was due primarily to a decrease of 14,067,041 ties treated, the number so protected in 1922 being 41,316,474 as compared with 55,383,515 the previous year. This information has been compiled by the Forest Service of the United States Department of Agriculture, in co-operation with the American Wood Preservers' Association and is published in the annual proceedings of the latter organization.

The reduction in the number of cross ties treated is in marked contrast with the increases in the quantities of piles, poles, cross arms, construction timbers and miscellaneous materials which were treated. The increase in the number of poles treated was particularly marked, 17,008,640 cu. ft. being protected in 1922 as compared with 10,959,256 cu. ft. in the previous year. The decrease in the number of ties treated is explained by the fact that: "At the beginning of

1920 ties were extremely scarce, while toward the end of the year production was accelerated by high prices, resulting in overstocks which lasted through 1921 and well into 1922. These overstocks of ties, which were purchased and treated in 1920 and 1921 and used as late as 1922, naturally influenced the treatment of ties in 1922 and probably account for the decreased number of ties that were subjected to treatment during that year."

CUBIC FEET OF TIMBERS OF VARIOUS CLASSES TREATED IN 1921 AND 1922

Classes—	1921	1922
Crossties .....	166,150,545	123,949,422
Piles .....	5,581,999	7,496,789
Poles .....	10,959,256	17,008,640
Wood blocks .....	6,202,904	3,947,551
Cross arms .....	108,715	374,829
Construction timber .....	11,876,708	12,713,080
Miscellaneous lumber .....	753,101	1,130,036
Total material treated .....	201,643,228	166,620,347

Of the total number of ties treated, creosote was used for 20,208,362, and zinc chloride was used for 17,418,101. In addition, 3,681,971 received the zinc-creosote emulsion, and 8,040 were subjected to impregnation by miscellaneous preservatives. Where the treatment was by creosote alone the average injection was 6.59 lb. per cu. ft. In the case of zinc chloride it was 0.5 lb., while with the emulsion treatment the injection averaged 0.5 lb. of zinc and 2.74 lb. of creosote.

There was a marked decrease in the use of zinc chloride as compared with the previous year, only 29,868,639 lb. being used in 1922 as compared with 51,375,360 lb. in 1921. That this material was replaced largely by creosote and by creosote-crude oil mixtures, is evidenced by the fact that there was an increase in the consumption of creosote in spite of the marked reduction in the total volume of timber treated. Creosote to the amount of 86,321,389 gal. was used in 1922, as compared with 76,513,279 gal. in 1921.

WOOD PRESERVATION STATISTICS FROM 1909 TO 1922, WITH THE CONSUMPTION OF CREOSOTE AND ZINC CHLORIDE

Year—	Total Material Treated Cubic Feet	Number of Cross Ties Treated	Creosote Used Gallons	Zinc Chloride Used Pounds
1909.....	75,946,419	20,693,012	51,426,212	16,215,107
1910.....	100,074,144	26,155,677	63,266,271	16,802,532
1911.....	111,524,563	28,394,140	73,027,335	16,359,797
1912.....	125,931,056	32,394,336	83,666,490	20,751,711
1913.....	153,613,888	40,260,416	108,378,359	26,466,803
1914.....	159,582,639	43,846,987	79,335,606	27,212,259
1915.....	140,858,963	37,085,585	80,859,442	33,269,604
1916.....	150,522,982	37,469,368	90,404,749	26,746,577
1917.....	137,338,586	33,459,470	75,541,737	26,444,689
1918.....	122,612,890	30,609,209	52,776,386	31,101,111
1919.....	146,060,994	37,567,927	65,556,247	43,483,134
1920.....	173,309,505	44,987,532	68,757,508	49,717,929
1921.....	201,643,228	55,383,515	76,513,279	51,375,360
1922.....	166,620,347	41,316,474	86,321,389	29,868,639

Of the ties treated 25,627,476 were hewed and 15,688,998 were sawed. Oak led with a total of 16,900,310 ties; and the second was yellow pine with 9,551,664.

## Baldwin Locomotive Officer Answers Grange Master

**C**RITICISMS AND QUESTIONS in regard to present methods of railroad operation which were made by John A. McSparran, master of the Pennsylvania Grange at an open meeting of the grange at the Clarion county, Pa., fair grounds on August 7, were recently answered in an open letter to Mr. McSparran by W. A. Garrett, general transportation manager of the Baldwin Locomotive Works. Copies of Mr. Garrett's reply to the criticism of the railroads by the farm official were sent to the secretaries of all the local granges in Pennsylvania, the editor of every newspaper in that state, chambers of commerce, Rotary Clubs, women's clubs, Governor Pinchot and the state officers, senators and representatives, railroad officers and agents at rural stations on the Pennsylvania, the Baltimore & Ohio and the Phila-

delphia & Reading for distribution to their patrons. The questions raised by Mr. McSparran and Mr. Garrett's replies to them follow:

"Why don't railroads own their own sleeping cars? Because one sleeping car company for all can provide better service, at less cost to the carriers, than the railroads could provide individually. Pullman cars are grouped for conventions, for extra heavy travel and during tourist periods. Also, the refrigerator cars under one distributing agency protect the farmers' perishable freight by grouping the refrigerator cars in California one or two months and, in proper season and consecutive months, economically transport to distant consuming markets perishables from Arizona, Texas, Florida, Georgia, the Carolinas, Pacific northwest states, Colorado, New York, Pennsylvania, New Jersey, Michigan and New England. Economy is apparent when you consider what surplus sleepers, parlor cars and refrigerator cars each railroad would have to provide and maintain to protect peak movements one or more months each year and yet remain idle for the balance of the year.

"Why don't the railroads operate their own express company? The express company officials will tell you that the pick-up and delivery cost in cities is growing beyond all bounds. The railroads cannot afford to provide horses and wagons, or trucks, for store door delivery of express for the same reason that the dairy farmer, when shipping his milk to the city, cannot afford to provide equipment for house to house delivery of the milk but must let the city milk dealers make the delivery.

"Why should the railroads get an extra charge for every passenger occupying a Pullman car? You cannot carry as many passengers in a Pullman car as you can in a modern coach; therefore, it costs the railroads more to transport a passenger in a Pullman car than in a coach on account of the fewer passengers per car and the greater dead weight of a Pullman car. If you elect to ride in a day coach, why should you assume some of the extra expense the railroad would incur for handling some other passenger who desires to ride in a parlor car seat or in a Pullman bed?

"Why pay such salaries to the railroad officials? Every railroad executive today might have spent his railroad service years in becoming a recognized expert or a captain of industry in some other line of business where he would have as great, if not greater, earning capacity than he has in railroad service today. Henry Ford is reported to be one of the richest men in this country through his own manufacturing efforts. Broad visioned men of affairs base executive compensation on results secured and not on pay roll rate. Thomas E. Mitten, president of the Philadelphia street car system, is reported as receiving a greater salary for the past ten years than any steam railroad president in the United States. However, you must admit that Mr. Mitten has the best street car system in this country. Likewise, our railroad executives have developed and today operate the best steam railroads, paying the highest wages to employees and charging the least freight rates of any railroads in the world.

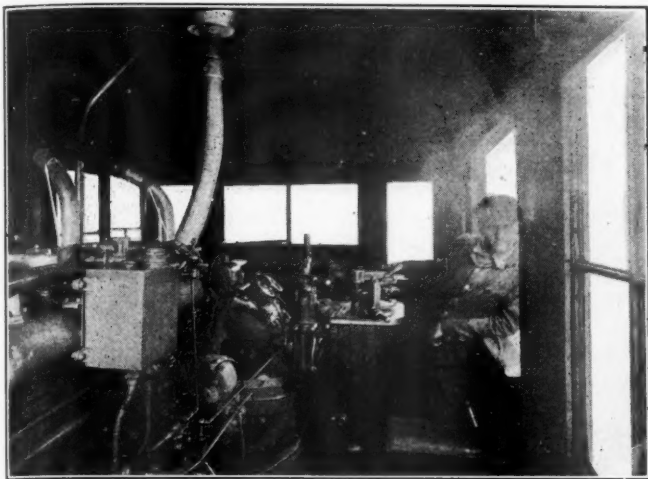
"Why do the railroads farm out the news privilege to the Union, or other companies? This is a highly specialized service and the news company can buy supplies by the carload for all of the railroads cheaper than the railroads themselves could buy; therefore, there is more net return for the railroads under the leasing privilege than there would be if each company ran this service alone.

"Every student of transportation, with facts and figures covering service by the railroads in Pennsylvania this year, will admit that there never was a time when the shippers were able to get service of greater quantity or better quality, which speaks volumes for the ability, integrity and earnestness of the practical, experienced executives now in charge, whose life work has been the upbuilding and successful operation of the railroads of this country."



## Gasoline-Electric Locomotive

**W**ORK ON THE DEVELOPMENT of gasoline-electric locomotives, halted by the war and subsequent activity, has been resumed by the General Electric Company. A new 40-ton unit embodying marked improvements in design and construction over previous types was completed recently; a simple throttling controller without resistances makes



Interior View of Locomotive

it possible to use the full power of the engine at all speeds.

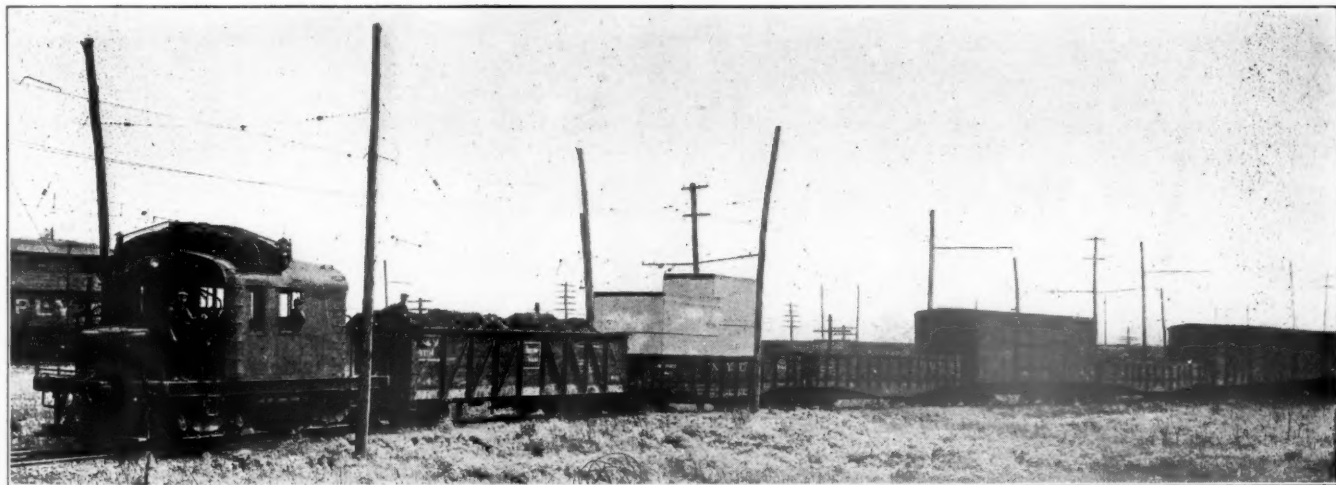
Comprehensive operating and maintenance tests have been given the new locomotive which show it to be more economical in operation than mechanical drive locomotives of the auto

The maximum power may be obtained from the gasoline engine for starting the train, due to the fact that the engine may be run practically at full speed. The generator characteristics are such that under this condition of starting, where a heavy torque is required at low speed, the heavy current drawn by the motors, automatically reduces the voltage on the generator. As the train accelerates and the current required becomes less, the voltage on the generator gradually builds up until there is full voltage when the locomotive will be running full speed. The control consists of a drum controller having 2 points, one for series connection of the motors and the other for parallel connection of the motors in addition to the regular reverse drum. The controller therefore, merely serves as a set-up switch. On the throttle of the engine is a contact which when the throttle is thrown to the idling position, takes off the excitation from the exciter. As shown in Figure 1, the exciter field is energized by a storage battery. This storage battery is kept automatically charged when the exciter is energized. The air compressor for furnishing air for the air brakes, is connected across the main generator so as to keep up air pressure while the locomotive is running. The locomotive has a double end control.

The running gear consists of two, four-wheel, swiveling, arch bar trucks with floating bolster. The center pin load is carried on a nest of helical gears. Journal boxes are of the MCB collar type. Wheels are 33 inch rolled steel wheels with MCB contour.

G-E straight and automatic air brake equipment is furnished including a 600 volt motor-driven compressor. An auxiliary ratchet type hand brake is also furnished.

The MCB long shank couplers with draft gear are of standard type. The center of the coupling is located 34½ in. above the rail. The cab is of steeple type construction. The radiator is of the fin tube type mounted on cab roof with



Gas-Electric Locomotive Hauling a 353-Ton Trailing Load

bus type. Nine months operating results indicate that the maintenance costs will also be very low.

The locomotive is expected to find wide application on steam road branch lines for freight and passenger service, switching, haulage, etc. It is equipped with four GE-820, 500-volt, 60 hp. mine type motors operating from a 100 kw. generator direct connected to a Sterling six cylinder Dolphin engine. The control is extremely simple, due to the flexibility of the generator. The generator has a shunt field excited from a direct driven exciter and a series differential field. The proportions of these fields are such that the result is practically a constant power generator. There are no starting resistances nor field regulating resistances and the speed of the locomotive is regulated directly by a throttle lever connected to the gasoline engine.

forced circulation from pump on the engine. A drainage tank is provided for emptying the cooling system and the locomotive has a 100 gallon capacity fuel tank. Two incandescent headlights with parabolic reflectors are mounted on each end of the cab.

The principal dimensions are:

Gage .....	56½ in.
Rigid wheel base .....	7 ft.
Truck centers .....	17 ft. 6 in.
Wheel diameter .....	33 in.
Width .....	9 ft. 6 in.
Length inside knuckles .....	24 ft. 7 in.
Overall height .....	14 ft. 6 in.

This locomotive, according to tests while in actual service, showed a consumption of 37 gallons of gasoline per 8-hour working day at 4.5 kw.-hr. per gallon, 65 watt hours per ton mile and 166 kw.-hr. per 8 hour day. About 3 quarts of oil

are necessary daily. The locomotive maintenance cost has been about 5 cents a mile.

The capacity of the locomotive is shown by the following tests during service which do not represent the maximum but rather the general average conditions.

The working schedule described is based upon 8 hours' duration, and does not indicate the total number of hours the locomotive is available for service each day.

Estimated locomotive mileage in 8 hours switching service—22 miles. Estimated average weight loaded train including locomotive—160 tons. Average number of cars per loaded trip—3 cars of 40 tons each. Approximate balancing speed on level tangent track (160 tons)—7 m.p.h. Average length of shift with average train—1,200 to 1,500 ft. Average speed per shift while in motion—5.0 m.p.h. Locomotive miles per 8 hour day (light)—8.0. Locomotive balancing speed running light—20.0 m.p.h. Locomotive ton miles per day 8 hours (22 m.) 880. Trailing ton miles per 8 hours—1,680. Total gross ton miles per 8 hour day—2,560.

While this locomotive is primarily designed as an independent operating unit, it can be so designed as to operate with a trolley, or third rail when in an electrified territory and continue on its own power when out of the electrified zone. It can also be used in connection with an electrically operated snow plow for clearing tracks.

## Flood Causes Disastrous Wreck on the Burlington

**F**OUR PERSONS are known to have drowned and over thirty more are missing in a wreck which occurred on Thursday evening, September 27, when Chicago, Burlington & Quincy train Number 30, eastbound, fell through a pile trestle bridge over Cole creek near Lockett, Wyo. (About 200 miles north of Cheyenne). An unprecedented flood in the ordinarily dry creek bed had weakened the supports of the bridge. A track inspector, who had examined the bridge only an hour before the wreck, had re-

not be determined since the conductor who had collected the tickets is missing.

The train had left Casper at 8:35 p. m., and reached the bridge, 15 miles from Casper, at about 9:15 p. m. The bridge, which was 111 ft. long, gave way, it is believed, when the locomotive was about one-third of the distance across. As the bridge fell in, the locomotive and tender, followed by the mail car, baggage car, smoking car and chair car, plunged into the flood. The first of the three sleeping cars was only partially submerged and the last two remained on the track. At the time at which the wreck occurred, the water in the creek bed had risen to such an extent that the stream was over 100 ft. wide.

Rescue work was greatly handicapped by the continuous rain and snow storms and the constantly rising waters. A relief train, sent from Casper, arrived at the scene of the wreck about 11 p. m. Ropes were stretched between the partly submerged cars and the bank of the creek and a number of passengers were removed from Pullman cars by this means. Attempts to recover the bodies of the victims in the totally submerged cars were rendered unavailing by the great depth of the flood and the swift current. Derricks brought from Casper on Friday finally succeeded in pulling out the first Pullman and the chair car but no bodies were found in these. The smoking car was so far buried in the mud and sand, however, that efforts to recover the bodies in it were futile. The locomotive and tender were found upside down. The engineman and fireman were among the missing. It is feared that some of the missing bodies may have been swept far down the North Platte river.

A number of bridges and a small amount of track were destroyed west of Casper, as far as Thermopolis about 134 miles from Casper. This is the same portion of the line on which floods last July wiped out nearly 70 miles of track. In reconstructing the line the track has been relocated at the places where there was the greatest danger from floods, so that while the rainfall during the past two weeks was as heavy as that during the flood period in July the damage done was much less. The line between Thermopolis and Casper which has been out of service since July was to have been placed in service again on October 10. These latest



"P. & A. Photo"

Wreck of Burlington Train No. 30 in Cole Creek, at Lockett, Wyoming, on September 27

ported rising water but that the bridge was in safe condition.

Up to Tuesday, October 2, the number of the dead was still unknown, only four bodies having been recovered. Of the 76 passengers and employees believed to have been on the train, only 34 had been accounted for, leaving 42 missing. The smoking car, in which most of the bodies of the missing passengers probably will be found, was still buried in the mud of the creek bed and all efforts to reach it had proved unavailing. The exact number of passengers could

floods will delay this opening about two weeks, it is expected. East of Casper the washouts were less extensive and the line was opened for service on October 2.

THE WYOMING NORTH & SOUTH RAILROAD ran its first train on September 25 from Casper, Wyo., to Salt Creek. One train will be operated each way daily on the newly completed 45 mile section. As planned, the new road, when completed, will be 320 miles long.



# Railways of India Adopt Revised Statistics

## Revision Follows Careful Study of American and English Methods—Many American O. S. Units Selected

By Brevet Major F. H. Budden, M. C., R. E.  
Indian State Railways

IN TWO PARTS—PART I

AS THE STATISTICS of Indian railways have lately been revised by a committee which sat during the winter of 1922-23, it has been suggested to me that an account of the revised statistics would be of interest to railway men in America, especially as many of the forms proposed for India are based on the forms in use in America. The report of the committee embodying the suggestions as to the form which the revised statistics should take was presented early in April, 1923, and necessary orders have already been issued by the Railway Board, which corresponds to the Interstate Commerce Commission in America, introducing revised statistics on the three state-managed lines from July 1, 1923, and on the remainder of the railways from October 1, 1923.

### Existing Statistics

The statistics of Indian railways have hitherto been based on the recommendations of a committee which sat in 1880, although certain small changes have been introduced since then. These statistics were adversely criticised by the Acworth Commission which sat in 1921 as being out of date and not in conformity with present day practice. Many of the complaints against the old form of statistics were due to the form of presentation, as in many cases it was difficult to find out the figure that one required. There was no logical sequence and statistical data were muddled up with account figures. There had also been in the past a lack of definition and the same figure was not necessarily based on the same data on different railways. Indian railways from 1880 have compiled ton-miles but these figures were not rated against such units as engine-hours except on one or two railways. Moreover, owing to the fact that operating officers were able to make very little use of the statistics compiled for the central authority the figures prepared often suffered from a lack of accuracy and were only available many months after the period to which the figures referred. The volume of the statistics published was also excessive as small railways were called upon to compile the same figures as railways many times their size.

### Method of the Committee's Work

The committee of 1922-23 had to decide as to its best method of work. Two methods were open:

- (1) To work on the basis of the existing statistics,
- (2) To start *ab initio* and, after finding out what statistics would be found useful by railways in checking the efficiency of their own operation, to base their results on these figures.

As the question of economy was emphasized in the committee's terms of reference and as it was generally agreed that the existing voluminous statistics were of little use to railways for checking their own operation, the latter method was selected as the only practicable one. Statements were drawn up based upon the material at the disposal of the committee, which consisted of copies of the statistics in force on four or five of the leading railways in America and of the same number in England. In addition, full details

were available of the figures supplied by railways in America to the Interstate Commerce Commission and by railways in England to the Ministry of Transport. This information had been collected by one of the members of the committee who had spent two months in America and two months in England on this work. These statements were then presented to the various operating and administrative officers on all the larger railways in India and opinions were recorded as to the value of individual figures. After the test of the criticisms of the various railways, the committee was left with a series of figures of a more or less uniform character which all railways had agreed should be kept. Naturally enough there were certain differences of opinion about details

### Main Changes Recommended

The following are the main changes recommended by the committee which have been accepted by the Railway Board:

- (1) The introduction of monthly statistics in the place of the yearly statistics at present furnished to the Railway Board.
- (2) The classification of railways under three classes for statistical purposes.
- (3) The division of important figures between main lines and branch lines, as it is realized that an average figure for the whole line is often of little use.

The first change follows the present practice in America and England. The second change follows the American practice although different limits have been selected for the various classes of railways in India. As regards the third change, this is a new departure but it should prove distinctly useful. Railways have been instructed to report what sections of their line they propose to consider as main lines and for these main lines one total figure will be required and another total for all branch lines.

Certain other minor changes were recommended by the committee and accepted in principle by the Railway Board such as:

- (1) The appointment of statistical officers on railways and the Railway Board.
- (2) The introduction of a central statistical section.
- (3) The allocation of the cost of the preparation of statistics to the general manager's budget.

The appointment of a statistical officer on railways follows the general practice in force on American railways and the practice which was becoming general in England before the grouping of railways. The introduction of a central statistical section is to prevent duplication of work and does not mean that all the clerks employed on statistics should necessarily be in the same building or in the same place. They would, however, all be under the statistical officer. On many railways in India there will not be at present sufficient work for a full time statistical officer and such an officer will also be employed on other duties.

Before any description of the monthly statistics is given perhaps a brief account of the conditions which prevail in India will not be out of place.

Generally speaking, conditions in India are much more

similar to those in America than in England; the average haul is long, parts of the country are thinly populated, the country in many places is mountainous and cut up by great rivers, etc.; but as many of the senior officers on Indian railways have been recruited from England it naturally follows that English methods have prevailed in the past. There is, however, one great difference in India from either America or England and that is the question of personnel. When it is remembered that a large number of the staff in India draw less than six dollars a month, one will realize that it would be folly to graft onto Indian railways any system which is beyond the capacity of their staff. For this reason many of the practices in force in England and in America have been adapted to suit Indian conditions.

The committee kept in mind the fact that statistics are only a means to an end and so it tried to cut down the number to a minimum and to exclude figures which are merely interesting and of little practical use.

#### Monthly Statistics

Six statements of monthly statistics are being introduced from October 1, 1923, namely:

- (1) Statement of passenger service,
- (2) Statement of freight service,
- (3) Statement of passenger and freight service,
- (4) Statement of rolling stock performance,
- (5) Statement of revenue and expenditure,
- (6) Statement of commodities.

It will be observed that these statements are based on the returns furnished by railways to the Interstate Commerce Commission and not on the English returns which are more numerous but of which each return deals only with one set of figures.

As some of the figures in the statements which are being introduced will be available earlier than others, two of the statements have been divided into two parts so that the figures which are available early need not be delayed for those which are ready later. The earlier statements will be forwarded 15 days after the month to which the figures refer.

#### Statement of Passenger Train Performance

The statement of passenger train performance deals with train-miles, vehicle-miles, switching-miles, engine-miles, engine-hours, coal consumption and lubricating oil consumption of passenger trains and brings out such averages as:

- (1) Train-miles per train-engine-hour compared with train-miles per engine-hour,
- (2) Switching miles per 100 train-miles,
- (3) Light engine-miles per 100 train-miles,
- (4) Pounds of coal consumed per engine-mile,
- (5) Pints of oil consumed per 100 engine-miles.

No figures to check the operation of passenger trains have been included but railways will be called upon to furnish such returns for one or two months in the year. Such figures will show:

- (1) The percentage of trains arriving on time to number of trains run,
- (2) The percentage of trains running 10 minutes and under late to number of trains run,
- (3) The percentage of trains not losing time to number of trains run.

This last figure is necessary to allow for the trains which are handed over late from one railway to another owing to the long distances, etc., met with in India and the difficulties of a tropical climate.

Certain of the more important figures included in the statement of passenger train performance are shown separately for main lines and branch lines.

#### Statement of Freight Train Performance

The statement of freight train performance includes figures similar to those found in the statement of passenger train performance and in addition the following figures are shown:

- (1) The average train-load in cars per train showing loaded and empty separately,
- (2) Car-miles per car-day,
- (3) Car-miles per switching engine-hour,
- (4) Car-miles per engine-hour.

#### Combined Statement of Passenger and Freight Train Performance

In addition to the above two statements, there is a combined statement of passenger and freight train performance which is based on ton-miles and passenger-miles. This statement is kept separate, as such figures are available later than those in the former two statements. In this combined statement are shown:

- (1) The average car load for coal and other merchandise separately,
- (2) The net and gross load of freight trains,
- (3) Net ton-miles per car-day,
- (4) Net ton-miles per locomotive-day,
- (5) Net ton-miles per switching engine-hour,
- (6) Net ton-miles per engine-hour,
- (7) Gross ton-miles per engine-hour,
- (8) Coal consumption per 1,000 gross ton-miles, passenger and freight trains separately,
- (9) Density per running track mile per day in passenger-miles and ton-miles.

Certain of the more important results are shown separately for main lines and branch lines.

#### Statement of Rolling Stock Performance

The statement of rolling stock performance deals with locomotives, passenger cars and freight cars and compares the average number under or awaiting repair and the number overdue repairs at the end of the month with the "authorized" equipment. Figures are also shown showing the amount of work done by each locomotive and passenger car and bring out such factors as the amount of oil used on passenger and freight cars in terms of the number of pints used per 1,000 car-miles. Figures of rolling stock performance are required in greater detail than those shown either in America or in England as this question is of great importance in a country where the climatic conditions are bad and the class of workmen inferior.

There is at present a general pool of freight cars in India with the exception of certain types and owing to the vast distances met with the question of how repairs are carried out is one which has to be carefully watched.

#### Statement of Revenue and Expenditure

The statement of revenue and expenditure shows the number of passengers carried, passenger-miles and the earnings from passengers carried under the four classes and the amounts earned from the carriage of parcels, etc. Similar figures are given for freight which are shown under:

- (1) General merchandise, including live-stock,
- (2) Coal and coke for the public and foreign railways,
- (3) Coal and coke on revenue account,
- (4) Other revenue stores including materials for construction.

The expenditure figures show the expenses of the various departments—engineering, locomotive, carriage and wagon, traffic, general, steam-boat, special and miscellaneous—and at the end of the statement the gross receipts and gross expenditures are compared with the estimated receipts and estimated expenditures.

As the majority of the railways in India belong to the state, a budget estimate is made of the receipts and expenditure and a careful check is kept weekly to ascertain whether the figures are above or below the budget estimate.

The present methods of accounting on railways in India do not allow of figures being available early but steps are being taken to change this.

#### Statement of Commodities

The statement of commodity statistics is limited to 24 commodities and figures are given showing:



- (1) The number of tons originating on home line whether local or foreign,
- (2) The number of tons of other traffic,
- (3) Total tons carried,
- (4) Earnings.

Only lately the number of commodities have been reduced from 138 to 58 but the committee recommended a further reduction to 24 owing to the expense entailed in compiling such figures. Railways will still be at liberty to keep any extra figures which they may require for their own purposes.

The advantage of compiling ton-miles by commodities has also been pointed out to railways as, if the density method of tabulation which is described later is adopted, the extra cost of compiling ton-miles for a limited number of commodities is not great.

#### Statements for the Smaller Railways

The above statements will be furnished by Class I railways while Class II and III railways will only be required to forward one combined statement showing a few of the more important figures. This combined statement is limited to 18 heads.

#### Differences Between Proposed

##### Statistics and Those Furnished I. C. C.

It will be noticed that there are certain differences between the statistics which are being adopted in India and those which are furnished to the Interstate Commerce Commission, in America. In many cases less detail is given than either in America or England but owing to the different conditions existing in India certain of the results are checked in greater detail. One or two new figures have been introduced, such as "siding engine-miles." There are in certain parts of India a large number of assisted and coal sidings and, previous to this, locomotives running over these sidings were shown as making either switching-miles or train-miles. If such a locomotive with a load is shown as a train, it upsets all figures for the rest of the line. Similarly if such a locomotive is shown as making switching engine-miles, the switching engine-miles of the railway are increased to an absurd extent. So, a new figure "siding engine-mile" has been introduced and this will enable a much fairer comparison being made between railways.

Greater attention is now being paid to the economical operation of railways in all countries and for this purpose accurate and up-to-date statistics are essential.

#### Other Returns to be Furnished by Railways

Certain other figures will be supplied by railways to the Railway Board either monthly or for selected months in the year concerning:

- (1) Claims,
- (2) Marshalling (classification) yards,
- (3) Staff.

#### Claims

As far as claims go, it was found that American railways pay greater attention to the classification and prevention of claims than most English railways, although, owing to the heavier losses since the war, greater attention is now being paid in England. There is, however, no standard number of heads under which claims are classified. The committee has recommended for India a standard number of heads on the lines of those in use in America, but naturally certain of the heads would not suit Indian conditions. The heads recommended are divided under four main heads and a number of sub-heads so that the small railways will classify their claims under the main heads while the larger railways can select any of the sub-heads which are found suitable. The heads recommended for India are:

- (1) Theft and pilfering, with three sub-heads,
- (2) Loss and damage for reasons unlocated, with three sub-heads,

- (3) Preventable causes due to working of staff, with four sub-heads,
- (4) Other causes with four sub-heads.

#### Yard Service

As far as it is known, no figures concerning the working of marshalling or switching yards are furnished to the Interstate Commerce Commission, but in England detailed figures of certain selected yards are sent monthly. The committee recommended for India certain monthly figures for selected yards but the number selected are far fewer than those in England and include one figure which many American railways prepare for their own use but which has been omitted from the returns to the Ministry of Transport, namely, the cost per car handled (engine time at so much per hour). This figure has been selected as it has a distinct psychological value.

#### Employee and Wage Statistics

Detailed monthly figures similar to those prepared in America would at present be of little value to Indian Railways; nor would the figures prepared by railways in England be suitable. Certain figures are, however, necessary and the committee has recommended that the number of men and the total wages paid by departments should be reported for certain selected months in the year. In the case of the larger departments figures will be shown by certain classes of men, such as in the case of the operating department for:

- (1) Men working in switching yards,
- (2) Conductors,
- (3) Engine crew, etc.

#### Statistics for Railway's Own Use

The figures recommended by the committee for the monthly reports to be furnished by railways to the Railway Board have been based on those figures which railways have agreed would be useful to themselves. It follows necessarily that a railway for its own purposes must prepare many more figures than those which it forwards to a central authority. For this reason the committee in the course of its report made certain suggestions as to the various figures which railways might find useful for their own purposes. These suggestions deal with such points as:

- (1) Daily statements,
- (2) Statements relating to the operation of freight and passenger stations, etc.,
- (3) Accidents,
- (4) Employment of Locomotives and Crews,
- (5) Efficiency of the engine crew,
- (6) Recording of engine failures,
- (7) Repair of locomotives, passenger and freight cars,
- (8) Operation of engine sheds (round houses),
- (9) Stores balances,
- (10) Work of other departments, such as engineering, medical, printing, clothing, etc.,
- (11) Manufacture of castor oil and gas, power plants, etc.,

As conditions in India approximate more closely those in America than those in England, many of these forms have been based on forms found in use on American railways. The committee realized that no one form will suit all railways and therefore it merely suggested various forms in the report so that railways in India will be in a position to know what the best railways in other countries are doing.

#### Equipment Repairs

The questions of the efficiency of railway locomotive and car shops and of cost accounting were not considered by the committee. Certain figures, however, were suggested bringing out the time rolling stock was unfit to run. This is perhaps the most important factor from an operating point of view rather than the actual cost of the repairs carried out.

The importance of presenting figures in the right way was also emphasized by the committee as much of the value of good statistics is often lost unless the figures are presented

in the right way. The practice of issuing full page statements concerning one phase of the results was recommended instead of combining several statements in book or pamphlet form which is done on certain railways in England. In the latter case there is always a delay in printing and the whole pamphlet may be hung up for one portion received late.

## Railway Consolidation Hearings at Boston

**T**HE HEARINGS before Commissioners Hall, Eastman and Cox on the disposition of the New England railroads in the consolidation plan which began in Boston on Monday, September 24, continued throughout the week. It was expected that the hearings would last only a few days but so many wanted to testify that it was necessary to hold evening sessions on Thursday and Friday, to have an afternoon session on Saturday, and finally to arrange for a continuance of the hearings on Wednesday of this week.

The first several days of the hearing were devoted to arguments in favor of the establishment of a New England consolidation, and it was not until Saturday morning that those who preferred allocation of the New England roads to trunk line carriers were given opportunity to be heard. As was pointed out in the *Railway Age's* report of the earlier days of the hearing in last week's issue, there appeared before the commission a large number of representatives of various chambers of commerce and other commercial bodies who expressed themselves as being in favor of a New England regional grouping. Several of these witnesses brought out the point that if the New England roads were given over to trunk line control, it would probably mean the loss to New England industry of the differential rates which apply on westbound traffic over the Grand Trunk and the Canadian Pacific.

### Percy R. Todd Favors New England Plan

This point was treated in considerable detail by Percy R. Todd, president of the Bangor & Aroostook, who was introduced as a witness for the Storrow plan on Friday. Mr. Todd discussed briefly the history of the differential rates. He said the trunk lines had been endeavoring for many years to bring about the elimination of these differentials and said that he spoke with a knowledge of the situation because he was associated for many years with the traffic department of the West Shore, at that time an independently operated property. The efforts of the trunk lines, he said, to secure the elimination of the differentials had been sufficiently successful so that about 1902, the differentials were reduced one-half. He said that it was only after considerable argument that the New England railroad men and shippers prevented the elimination of the differentials by the United States Railroad Administration. Mr. Todd then took up the question as to whether, if the New York Central acquired the Boston & Maine, the Maine Central and the Bangor & Aroostook, as suggested by the advocates of the trunk line plan it would not be able to keep traffic from moving from points of origin on these lines via the Canadian routes. He said that it would be the New York Central's desire to secure the long haul on this traffic to western points, and that the law and decisions of the Interstate Commerce Commission protected it against having to short haul itself. He said also in discussing the plan presented by President McDonald of the Maine Central for affiliation between the New York Central and the Maine Central and the taking over of the Worcester, Nashua & Portland division from the Boston & Maine that by using this route the New York Central would take away considerable traffic from the Boston & Maine. Discussing the possibility that the New York Central might

route a large quantity of grain to Portland via this route, Mr. Todd said that this grain would have to be carried from Chicago to Portland at the same rate the Grand Trunk hauls it, namely, at the Philadelphia rate. This rate is lower than the Boston rate so that the result would be criticism on the part of those interested in the ports of Boston and New York. This situation as a whole would make it unlikely that much New York Central grain would move through the port of Portland.

### Trunk Line Control Would Be "Suicidal"

F. J. Lisman of F. J. Lisman & Co., New York, appeared Friday afternoon and took occasion to enter a strong plea in favor of New England consolidation. He expressed an optimistic view of the prospects of the New England lines, but said that trunk line control would be suicidal. He criticized the suggestions of rehabilitation by co-operation in the Storrow plan as impractical. He suggested on the other hand a plan of co-operation between the New England roads and the trunk line carriers whereby the latter would keep separate accounts of their New England business and guarantee any deficit below the interest charges of the New England roads. He thought that there might be possible means of coercion by the Interstate Commerce Commission to effect this plan. On the other hand, if some lines would not join, New England shippers could route traffic over lines that would. The trunk line roads had an interest in the situation in that if the New England roads did not come through there was danger of government control or ownership. Receivership for the New Haven he declared would be a calamity and would hurt the country as a whole. He did not, however, believe receivership to be a danger.

The Boston Chamber of Commerce, which recently decided by a referendum vote of three to one to favor the Storrow plan, was represented at the hearings on Friday by its president, Howard J. Coonley, and by Homer Loring, chairman of a special committee which studied the question for the chamber. On Friday evening, W. H. Chandler, manager of the transportation bureau of the Boston Chamber of Commerce, and formerly president of the National Industrial Traffic League, testified at length outlining the argument in favor of the New England plan. Mr. Chandler cross-examined several of the witnesses appearing at various times during the hearing in opposition to the New England grouping.

The opposition to the New England plan was presented primarily by representatives of the Associated Industries of Massachusetts. Philip Dexter, who was a member of the New England Joint Railroad Committee but who dissented from the Storrow report findings in favor of a New England system, gave his reasons for so dissenting in testimony on Saturday morning. It was his idea that while the people of New England might prefer a New England consolidation for the railroads of that section, it was idle to suppose that such a consolidation could be brought out while the railroads are in their present condition. He criticized the Storrow plan for the rehabilitation of the finances of New England lines and with reference to the state aid proposed in the Storrow plan, and said that it would require an amendment of the constitution of the state of Maine which it would be very difficult to effect. It was his idea that the weak point in the proposed New England grouping was that the roads are weak now and would remain weak because of inadequate income and inability to give service which would result in their retrogression until finally receivership was reached. He proposed that there was no difficulty from the standpoint of size as might result from the acquisition by the trunk lines of the New England carriers, and expressed a view that the gross receipts of the New England railroads were of sufficient volume so that New England interests would not be neglected. He admitted, on



interrogation by Commissioner Eastman, that difficulty was presented in an idea that if a New England railroad could not make money now, it would be difficult for a trunk line to come in and make money after acquiring it. Mr. Dexter said that the trunk line would acquire, at first, a liability, but by giving better service it would build up industry in New England and develop a paying business.

Edgar J. Rich, counsel for the Associated Industries of Massachusetts, explained why it was that that organization opposed the Storrow plan, and he was followed by Charles A. Andrews, formerly president of the Associated Industries, and who was a member of its committee which came to the decision to adhere to the favoring of trunk line consolidation. Mr. Andrews' views were stated in part as follows:

### Trunk Line Advocates State Views

"With regard to the subject of railroad consolidations the conclusions of the Associated Industries of Massachusetts are that the welfare of New England requires that she shall have continuous and adequate transportation service, at rates not exceeding rates paid for similar service by her industrial competitors and that consolidations should be authorized which will function to this end. Adequate service includes:

Sufficient physical facilities and necessary extensions.

A diversity of routes through all the New England gateways at Hudson River and Canadian points.

A continuation of the differential rail and water routes and rates.

A railroad management located in New England and easily accessible to the New England public.

"That there may be sufficient physical facilities and necessary extensions, it is essential that the railroad system or systems operating in New England shall have financial strength and a sound credit standing, so that they can secure whatever capital is needed for refunding maturing obligations, including large amounts owed to the United States Government, and for covering new capital expenditures. Unless this financial strength and credit standing are assured the first requisite for adequate service will not be met.

### Handicaps to Operation

"We conclude, therefore, that we should first attempt to determine what kind of consolidations will produce a railroad or railroads in New England of financial strength and sound credit. After we have reached a determination of this question it will be necessary to determine whether under such a system or systems we can be assured of the factors enumerated, and if such assurance is not evident or probable then it will be necessary to reexamine the whole matter to determine whether it will be preferable to accept a railroad with insufficient financial strength and impaired credit because it gives the necessary assurance as to facilities, routes, differentials and home management.

"We take cognizance of the requirement laid upon the Commission by the Transportation Act (Section 5) to provide for railroad systems of equal earning ability (as compared to their respective property values) under uniform rates and equally efficient management. This leads us to consider the question of the earning ability of the existing New England roads as compared with other roads in Eastern territory. We find that the cost of the service required of the New England roads as a whole is constantly higher than is the cost of the service required of other roads in Eastern territory; that this has been true for twenty years or more and is true now; that the principal reasons for this fact are the excessive cost of fuel occasioned by remoteness from the mines, the shorter average haul occasioned by numerous branch lines and diverse routes and the larger proportion of terminal service. We find that the fact of this higher cost is generally recognized; it was a principal contention of the New England roads before this Commission in the New England divisions case.

"If then the New England roads, or the principal ones, were consolidated into a New England system, the operating costs of this system would be abnormally high as compared with other roads or systems in Eastern territory despite any incidental savings which might result from unified operation as distinguished from the present diversified operation. It follows from this fact that such a New England system would not achieve financial success equally with other systems of lower operating costs under a system of uniform rates made to meet the requirements of all systems considered as a whole. Under such rates a New England consolidated system would receive a net income less than a fair return upon its property, while other roads were receiving more than such fair return. Under such circumstances the New Eng-

land consolidated system would not be financially strong and of sound credit.

### State Aid Out of the Question

"The committee next gave consideration to the question of whether there were any methods by which such a consolidated New England system could be provided with the income needed to cover its higher operating costs and in addition to provide a fair return upon its property value, so that it could become a system of financial strength and sound credit.

"One such possible method is government or state aid. We rejected this possibility for two reasons. First, because we think government or state aid tends in the direction of public ownership and management, one or both; and we are convinced that such an outcome is to be avoided at all costs. Second, we can find no authorization in the law for this commission to make a plan for railroad consolidations based in any degree on the factor of government or state aid. On the other hand, we understand that the commission is under obligation to provide in its plan for systems so arranged that all can make an equal living from rates, and from rates alone.

### Relations with Trunk Lines

"Another suggested method of enlarging the income of a consolidated New England railroad system up to the point of fair return on property value, is to secure for such a system larger divisions of joint rates than they have heretofore enjoyed. This method was urged by the New England roads in the New England division case. Neither from the provisions of the law, the decision of the Commission, nor the decision of the Supreme Court are we able to conclude that joint rates can be so divided with the New England roads as to make up to them the whole of the disability occasioned by the abnormal cost of service. This abnormal cost adheres to joint business, to local freight business and to passenger business. The revenues of the New England roads derived from joint freight business are about 40 per cent of their total revenues. To divide joint rates so as to fully reimburse the New England roads for higher costs arising not only from joint freight business but also from local freight business and from passenger business—that is, to reimburse them for 100 per cent of their disability by juggling a 40 per cent item of their income—would cause serious results to other carriers, parties to the joint haul.

If joint rates were divided as to make up to the New England roads the whole of their higher operating costs, we are convinced that such a procedure would be highly detrimental to New England. If joint rates were so divided as to be non-compensatory or non-profitable to the roads connecting with the New England roads, such outside roads would have strong inducement to discourage traffic to and from New England—even to the point of inducing New England industries to abandon their New England location. If New England traffic were made unprofitable to the trunk lines then the trunk lines could be expected to do everything in their power to decrease its amount. We think it would be a matter of serious consequence to create a situation in which the trunk lines would array themselves against the growth of New England industry because the more it grew the greater their loss for handling its traffic.

"Our conclusion, therefore, as to securing financial strength and credit standing for a consolidated New England system is that it would be necessary to resort principally to the method of increasing rates in New England, thereby adding a very heavy handicap to New England industry. It appears probable to us that such increases as were necessary would place at least some of the rates above the level of maximum productivity and then the increase would defeat its own purpose.

"It is clear that a consolidated New England system would assure, so far as should be found by this commission to be in the public interest, the openness of routes and the differential rail and water routes which all agree are essential for New England; and the management of such a consolidated system would surely be located in New England. Thus, a New England system would be financially defective, while it would serve to comply with the other requirements of the standard which we regard as necessary to insure adequate transportation.

"It is the conclusion of the Associated Industries that affiliation between the New England roads and trunk lines can be made so as to produce systems of financial strength and credit standing which would be able to rehabilitate their New England ports and furnish adequate physical facilities. We find it generally conceded that financial strength and credit standing would result from trunk-line affiliation. If no more than the financial question were involved we submit that there would be a general agreement as to the advisability of some form of trunk-line affiliation.

"It is necessary to determine, however, whether the advantages which appear to us to be necessities would be assured under any form of trunk-line control of the New England roads. It is urged by some that if a given trunk line owned a given New England road, such trunk line would insist upon handling all

traffic originating within its New England territory, so far as it reached or reached towards the desired destination, and that it would be protected by the so-called short-haul clause of the law eliminating all routes other than over its own lines. Thus the shipper would have but one route west and south from the Hudson, in place of several which he now has. We point out that whenever it is proposed to eliminate an existing route the problem before the commission is to determine whether the proposed elimination would still leave in operation another route which at a reasonable rate would afford adequate and reasonable service to the public. We find that this is the consideration in accordance with which this commission makes its decision, and that the protection of the so-called short haul clause of the law does not serve to allow the elimination of any existing route if thereby the public interest would be curtailed. In 27 I. C. C. at page 543, the commission says:

"As we have said before, we fully recognize the right of a carrier to get the long haul out of the traffic which it originates, but this right is strictly subordinate to the public interest, and when its assertion results in unreasonable and unjust rates or restrictions on the conduct of business it cannot be approved."

#### The Maintenance of Differential Rates

"We are convinced that the power of this Commission is adequate to prevent the elimination of any existing route the loss of which would adversely affect the public interest, either from the point of view of adequacy of service or reasonableness of rate by other route or routes. This being so, no existing route out of New England could be eliminated by any trunk line after it had secured control of a New England road, for any reason whatsoever, unless it could be shown to the satisfaction of this Commission that no injury to the public interest would be accomplished thereby. We understand that herein is protection to the New England shippers against the loss of any existing route which in the judgment of this Commission is reasonably necessary for adequate service at reasonable rates. If a trunk line owning a New England road was, in the judgment of the Commission, able to furnish adequate service at a reasonable rate, then the so-called short-haul clause would serve to secure the traffic to such trunk line as against other roads; but in such case New England shippers would have no just cause for complaint.

"We thus come to the conclusion that some form of trunk-line consolidation will secure the necessary financial strength and credit standing which all agree are essential, and that no such financial strength and credit standing are discernible or possible for a consolidated New England system; furthermore, that there is ample protection in the law and its administration by this Commission to secure for New England under a trunk-line consolidation the diversity of rail routes, the differential rail and water routes, the resident management which we regard as essential.

"We, therefore, urge that the Commission prescribe trunk-line consolidation for the New England roads as being the form of consolidation which will best secure for New England an adequacy of service which has been denied us for many years."

## A Compact Cinder Handling Plant

TO MEET THE DEMAND for a smaller and more compact model of a N. & W. type cinder plant, Roberts & Schaefer, Chicago, have introduced a smaller design known as a Junior N. & W. cinder plant. As in the older design, the ashes are dumped directly from the locomotive ash pans into a bucket located in a depressed pit below the track. This bucket, which is mounted on wheels, is hoisted up a structural steel incline to a point above an adjacent track and there automatically emptied of its contents. A heavy cast iron cinder hopper is bolted to the track structure as a means of deflecting the cinders into the car as they are dropped from the ash pans.

The new design is of smaller capacity than the older one, the elevating bucket having a capacity of 50 cu. ft. instead of 80 cu. ft. The smaller plant has the advantage, however, that it requires less space than the larger type. The distance between the dumping and loading tracks is 24 ft. instead of 26 ft., while the track pit has a depth of only 5 ft. 6 in. instead of 9 ft. 10 in. in the older design, thus greatly increasing the opportunity for ready drainage of the pit.

The plant is operated by a 10-hp. enclosed electric hoist with automatic stop and solenoid brake. Provision for a Cutler-Hammer pushbutton electric control facilitates the

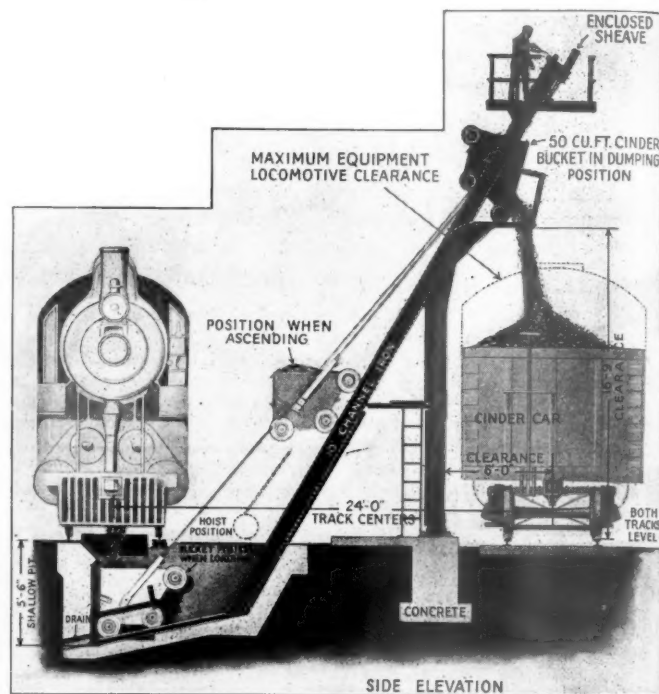


Diagram of the Junior Plant in Operation

operation of the plant by common labor. Although electric operation is recommended, the plant will be furnished for operation with compressed air. Although smaller than the original model, the track hopper, which is 7 ft. long, will



An Installation of the Larger Type of Cinder Plant

handle the cinders from any size of locomotive and the operating equipment is designed to complete the entire cycle of elevating, dumping and descent of the bucket in 1½ min.



## General News Department

At a meeting of the Railway Club of Greenville (Pa.) on September 28, W. S. McFetridge, principal assistant engineer of the Bessemer & Lake Erie, read a paper on the Reconstruction of Broad Street Station, Philadelphia.

The October meeting of the Pacific Railway Club, San Francisco, will be held on October 25 at which time E. T. Howson, western editor of the *Railway Age*, will speak on "Some Operating Phases of Maintenance Work."

The Western Society of Engineers, Chicago, will present a program on the transportation of perishable freight on Monday evening, October 15. G. H. Nelson, manager, refrigerator department, Atchison, Topeka & Santa Fe, will speak on transportation requirements, and J. W. Ingraham, chief engineer of the Railways Ice Company, will speak on the engineering of refrigeration.

The Canadian Brotherhood of Railway Employees, at the concluding session of its biennial convention at Calgary, Alta., on September 22, re-elected A. R. Mosher president. The vice-president, secretary-treasurer and the entire executive board were also re-elected for the ensuing term, setting at rest rumors to the effect that there had been a break in the ranks of the brotherhood. The next convention will be held in Toronto in 1925.

The "Direct Action" of the trainmen of the Muscle Shoals, Birmingham & Pensacola Railway, who last month stopped work, tying up all trains, because the company, from its lean treasury, could not pay them their wages, had the desired effect after ten days and all the men returned to work on Wednesday, the 26th. Switching in the freight yards at Pensacola was reported as again going on with cheerful activity; and it was announced that "all troubles had been wiped out."

Requests for wage increases of approximately 12 per cent are to be made at once by general chairmen of the Brotherhood of Railway Trainmen and the Order of Railway Conductors on all roads throughout the country. A joint referendum vote of trainmen and conductors resulted in a practically unanimous vote in favor of the recommendations of the general chairmen, which were formulated at a meeting at Chicago on July 9 and 10. The demands of the trainmen are for the restoration of the wage rates in effect prior to July 1, 1921, when decreases of approximately 12 per cent, amounting to 60 to 64 cents a day for these employees, were ordered by the Labor Board.

### Central Railway Club Meeting

It has been found necessary to make some changes in the program of the Central Railway Club meeting which will be held at the Hotel Statler, Buffalo, N. Y., on Thursday, October 11. The speaker will be E. F. Mason, assistant master mechanic of the Pennsylvania Railroad at Renovo, Pa. His subject will be "Railroad Water Supply."

### Illinois Central Moves Large Office Building

What is said to be a new record in moving large buildings was established this week in Chicago when a seven-story brick office building of the Illinois Central, 80 ft. by 130 ft. and weighing 8,000 tons was moved 90 ft. to provide for street widening incident to the terminal improvement work being done by that company in that city. The aged condition of this building, its proximity to one of main heavy traffic boulevards of the city; and the presence of water in the excavation, which was carried to clay  $1\frac{1}{2}$  ft. below the level of Lake Michigan (adjacent) complicated the problem. The building was carried on a grillage of steel beams supported on rails and was moved without mishap, being transferred 40 ft. in one day.

### P. R. R. Abandons Mount Vernon Shops

Orders have been issued by the Pennsylvania Railroad permanently closing the shops of the Akron division located at Mount Vernon, Ohio, which have been in continuous operation for 50 years. It is said that the decision to abandon the shops was on account of Mount Vernon being located at a considerable distance from the division terminals and also the shop facilities being inadequate to handle the locomotives now used by the Pennsylvania. Over a year ago a portion of the shops was damaged, entailing a loss of \$100,000. Reconstruction work was started but never completed. Over 300 men now employed at the Mount Vernon shops will be sent to other shops on the Pennsylvania. These men will be given their preference as to the plan of employment and will retain their seniority rights.

### Railway Fire Protection Association

The Railway Fire Protection Association will hold its tenth annual meeting at the Hotel Cleveland, Cleveland, Ohio, on October 16, 17 and 18. The program will include addresses by W. A. Colston, vice-president of the New York, Chicago & St. Louis, and L. W. Wallace, secretary of the Federated Engineering Societies, who will talk on locomotive spark hazards. Reports will be presented on railroad fire statistics, on locomotive fire hazards, on the storage and handling of gasoline and electric motor trucks in freight houses and terminals, on the protection of piers and wharves, on fire prevention in timber treating plants, on progress in the use of standard hose couplings, on the emergency housing of employees, and on carbon tetrachloride extinguishers. At the conclusion of the meeting an inspection will be made of the New York Central's freight house in Cleveland.

### Short Line Association Holds Annual Meeting

The annual meeting of the American Short Line Railroad Association was held at the Hotel La Salle, Chicago, on October 3 and 4. Among the subjects which were considered were: Congressional legislation, valuation, motor truck competition, recapture of excess earnings under paragraphs 6 and 9 of Section 15A of the Transportation Act, bases of per diem car hire and consolidation.

On the evening of October 3 the Traffic Club of Chicago gave a dinner to members of the association at which Honorable Atlee Pomerene, former United States senator from Ohio and a member of the Senate Conference Committee which completed the Transportation Act of 1920, spoke on the railroad transportation problem; Henry A. Palmer, editor of the *Traffic World*, spoke on railroad consolidations and Captain John W. Corby, director of public relations of the National Transportation Institute, spoke on the development of the National Transportation Institute.

### I. C. C. Denies Petition to Inspect

#### Automatic Train Control Installation

The Interstate Commerce Commission has denied the petition filed by the Pennsylvania asking the commission to make an inspection and test of the automatic train control installation on its line between Sunbury and Lewiston, Pa. The commission now has a fixed policy of not making any further inspection or tests on any of the 49 roads named in its train control order. These roads are required to complete their installations over a complete engine division by January 1, 1925. The commission takes the position that the period between the date of the train control order and January 1, 1923, was expressly for such tests as the carriers might desire to make, preparatory to making their selections; and that the two-year period, January 1, 1923, to January 1, 1925, was provided in accordance with the law in which to make the actual installation. The commission has taken the posi-

tion now that it will not pass on any installation until a complete engine division has been equipped in accordance with the order, as compliance with the order depends upon proper installation and maintenance, and not merely on the device itself.

### Pennsylvania Savings Fund to be Discontinued

Since the formation, in July of this year, of the Pennsylvania Railroad Employees' Provident and Loan Association, which has a saving fund provision, the need for the Pennsylvania Railroad Employees' Saving Fund, established by the company in 1888, has ceased to exist; and the Board of Directors of the road has issued an order stopping the receipt of deposits by the older fund after October 31, and discontinuing payment of interest on deposits on December 31, 1923. Depositors may transfer money to the Saving Fund of the new Employees' Provident and Loan Association.

The Pennsylvania Railroad Employees' Saving Fund has regularly paid an average of 4 per cent interest on deposits and has very successfully provided the facilities for which it was intended.

### The Port Richmond Terminal

The Philadelphia & Reading advertises itself by calling attention to its Port Richmond Terminal, at Philadelphia, said to be the largest freight station in the world. It has a frontage of 5,400 ft. on the Delaware River, covers about 225 acres, and has track storage for 5,600 cars; and there are over 86 miles of tracks in the terminal.

There are grain elevators and piers for export, for coastwise trade and for a car float service between different points in Philadelphia and Camden, in addition to a yard for coal storage that holds 180,000 tons. This terminal is equipped with every modern labor-saving and time-saving device; and to increase the capacity of the coal piers in the near future to 7,500,000 tons yearly, a monster McMyler car-dumping machine is being installed at a cost of \$1,250,000. The Reading is fourth among the railroads of the United States in the amount of tonnage handled.

Philadelphians are urged to regard the Reading as something belonging to the community that is very worth-while; and to help keep it in the community, so that it can function free and untrammelled.

### Car Inspectors and Foremen Meet

The Chief Interchange Car Inspectors and Car Foremen's Association held its twenty-second annual convention at the Hotel Sherman, Chicago, October 3, 4 and 5. In addition to an extended discussion of A. R. A. rules of interchange, the members listened to addresses on the following subjects: Lubrication, by M. J. O'Connor, special mechanical inspector, New York Central; Prevention of Loss and Damage to Freight, by T. A. Ward, district freight claim agent, New York Central; Bureau of Explosives, by E. J. League, inspector; Maintenance of Equipment, by A. S. Sternberg, master car builder, Belt Railway of Chicago, and F. C. Schultz, chief interchange inspector, Chicago; Traffic Observations, by James Webster, assistant traffic manager, New York Central. Two papers on car inspection, which were awarded first and second prize in a contest recently conducted by the Railway Mechanical Engineer, were also read, these papers being by A. J. Mitchner, division general car foreman, Michigan Central, and W. J. Owen, chief interchange inspector, Pekin, Ill. The "question box" committee made a report and there was also a discussion of billing rules.

### Chicago Shippers Adopt Resolutions Opposing Warfield Plan for Consolidation of Chicago Terminals

At a meeting of the Chicago Shippers' Conference Association on October 2, a resolution was passed opposing the unification of control or operation of railroad terminals in the Chicago district and favoring the continuance of the competitive system in the handling of both carload and less-than-carload shipments.

The special Terminal Committee of this association which has investigated the Warfield plan of unification of control and operation of the railroad terminals within the line of the Elgin, Joliet & Eastern from Gary, Ind., to Waukegan, Ill., reported that the plan is based on a complete monopoly of railroad service in the Chicago district, with competition entirely removed so that shippers and receivers would be compelled to deal with only one company with-

out recourse to any competing service. The committee called attention to the fact that the industrial growth and strength of Chicago is due largely to the energy and initiative of individual roads under the spur of competition. It believes that any plans for present and future operation and development should be made with the continuance of competition as a fundamental consideration. In recent years the tendency of railroads within the district to co-operate with each other and with the shippers has resulted in a substantial improvement in service and lower operating costs without reducing competition.

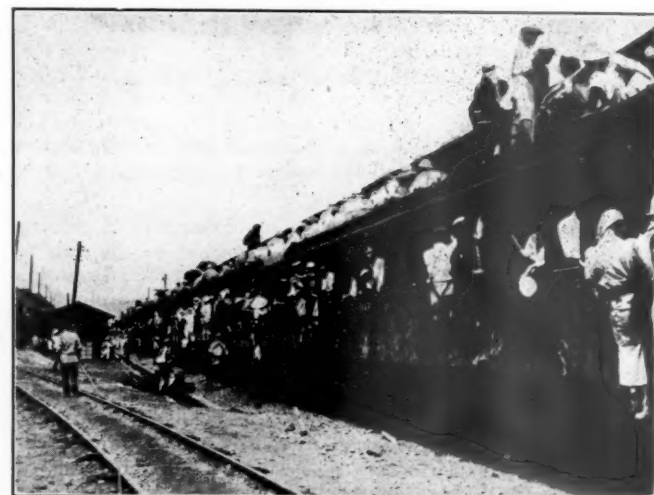
Under the Lowrey arrangement the terminals are open and Chicago net rates apply with few exceptions to and from all industries, regardless of which railroad hauls the shipment. While this arrangement contains many of the benefits of common operation, it at the same time preserves competition.

The committee also reported that the volume of business being handled in the Chicago terminals today is greater than it has ever been in history while the service is better than it has ever been before. Aside from the competitive consideration the volume of business handled by the railroads in the Chicago district is so enormous that the administration of the terminal by a single operating organization would be impracticable.

### Extent of Earthquake Damage to Japanese Railways

The New York office of the Japanese Government Railways has received the following information by cable concerning the extent of the damage done by the earthquake to its railway lines.

The head office, the government railway hospital in Tokio, the government uniform manufacturing shops in Tokio, the government lumber creosoting plant in Tokio and the following stations were all destroyed: Shimbashi, Manseibashi, Iidamachi, Ueno, Ryogoku (all in Tokio), and Sakuragichi (in Yokohama, the terminal of the electric line between Tokio and Yokohama).



"International Newsreel"

### A Train Leaving Tokio After the Earthquake

The Tokaido Line, east of Hakone and around Tokio were seriously damaged, but all will be in operation (though partially connected on foot) by the end of September. Officials and employees' residences at Shiodome, near Shimbashi, Ueno and Ryogoku were entirely burned down, but no casualties resulted among the chief officials.

The losses also include the burning of 416 passenger cars, 31 electric cars, 893 freight cars, and 33 locomotive engines.

### Recent Labor Board Decisions

A number of decisions of local character have marked the return to activity of the Railroad Labor Board after the summer vacation. Clerical employees on the Southern Pacific holding positions of minor or supervisory authority below the rank of subordinate officials have been granted all of the privileges accruing to the ordinary workers, including the eight-hour day, benefits of the rule relating to discipline, seniority, overtime and various other provisions. In another decision, a petition brought against the



Chicago & Eastern Illinois by the United Association of Railway Employees of North America, an "outlaw" organization, that it be allowed to negotiate rules and working conditions for the yard conductors, brakeman and switchtenders at the Chicago terminal of the road, was dismissed. The board also denied a petition for rehearing by the Gulf Coast Lines and the Houston Belt & Terminal on a decision handed down June 29, directing that a secret ballot be taken to determine whether the Railway Employees' department of the American Federation of Labor or a "company" organization should represent the shop employees on the two lines.

Shopcrafts employees on the Michigan Central and the Ann Arbor have been granted wage increases of two cents an hour, according to notices recently sent to the Labor Board. A petition has also been filed with the board by the Ferry Boatmen's Union of California for wage increases approximating \$30 a month for firemen, deck hands, cabin and night watchmen employed on the Southern Pacific, the Atchison, Topeka & Santa Fe, the Western Pacific and the Northwestern Pacific.

A railway employee's membership or non-membership in a labor organization is not a matter of compulsion, according to a decision of the Labor Board in sustaining the complaint of the Switchmen's Union of North America against a contract of the San Antonio & Aransas Pass and the Brotherhood of Railroad Trainmen guaranteeing that 85 per cent of the road's yard employees should be members of the trainmen's organization. In the board's decision it was noted that the Switchmen's Union of North America "negotiated the first percentage agreement ever executed, but that organization has renounced the practice and become a victim of it." Reinstatement of an employee who had been discharged through operation of the percentage provision was ordered by the board. In another decision, the Labor Board held that it was without jurisdiction to pass upon the question of the removal of the shops of the Missouri-Kansas-Texas from Sedalia, Mo., to New Franklin.

The Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen and Enginemen presented requests for wage increases of 12½ per cent to roads in all parts of the country on October 1. The petitions were filed with the roads whose contracts expired on that date and others will be filed when later contracts expire. The requests are for restoration of the scales in effect before the reduction of July 1, 1921.

### Col. Kennedy's Luncheon at Ragged Edge

Col. Moorehead C. Kennedy, Vice-President of the Pennsylvania Railroad, gave another of his unique luncheon parties at his home at Ragged Edge near Chambersburg, Pa., on September 29. The history of these luncheons has been given in the *Railway Age* in the past. When Colonel Kennedy became president of the Cumberland Valley Railroad he continued a custom which had been begun by his father who preceded him as president of this railroad by entertaining each year at Ragged Edge the directors of the road and others of his friends. The parties attending on these occasions gradually grew larger and for some years it has been necessary to handle them in special trains to Ragged Edge.

The guests included railway presidents and other high officers from all over the United States. Besides railway officers, a few of those who attended were Charles M. Schwab, Chairman of the Bethlehem Steel Corporation, United States Senator Pepper of Pennsylvania, Governor Pinchot and former Governor Sproul of Pennsylvania and A. W. Thompson, President of the Philadelphia Company.

Colonel Kennedy served during the world war as Deputy Director General of the American transportation corps in Europe and among the guests were several men who served with him as officers of the transportation corps.

### Railway Revenues and Expenses for August

The net railway operating income of the 193 Class I railroads for August was \$98,381,200, which represents an annual rate of return of 4.94 per cent upon their tentative valuation plus additions and betterments to January 1, 1923, according to preliminary compilations. For the Eastern district the rate of return was 5.16 per cent, for the Southern district 5.38 per cent and for the Western district 4.6 per cent. Sixteen roads had deficits for the month. Operating revenues for August amounted to \$561,456,700, an increase of 19 per cent as compared with August, 1922, while

operating expenses amounted to \$424,751,400, an increase of 10 per cent. For the eight months ended with August the net railway operating income was \$625,634,900, an increase of \$159,187,800 as compared with the corresponding period of last year. This represented a rate of return of 5.4 per cent for the roads as a whole and 6.18 per cent for the Eastern roads, 6.34 per cent for the Southern roads and 4.23 per cent for the Western roads.

The Interstate Commerce Commission has issued a modification of its automatic train control order to permit the Union Pacific to install an automatic train control device between Sidney, Nebr., and Cheyenne, Wyo., instead of between Omaha and Cheyenne. The company had also asked that this installation be allowed in lieu of that on the Oregon-Washington Railroad & Navigation Company between Portland and Pendleton, Ore. The petition as to the latter was denied. The commission has also authorized the Pennsylvania to make its installation between Baltimore and Harrisburg instead of between Philadelphia and Pittsburgh and the Western Maryland to make its installation between Elkins, W. Va., and Thomas, W. Va.

### "New York Central Lines Night" at Toledo

The above is the name that was given to an unusual dinner of the Transportation Club, Toledo, Ohio, on the evening of Thursday, September 27, when a thousand citizens of the city entertained about 300 representatives of the New York Central Railroad and its controlled lines. More than three-quarters of the hosts were leading business men and large shippers of Toledo, and the New York Central party included President A. H. Smith, Vice-President P. E. Crowley and a large number of other high officers.

L. G. Macomber, president of the Toledo Transportation Club, appears to have been the leading spirit of the occasion, and he was ably seconded by Mayor B. F. Brough and President J. R. Cowell of the Chamber of Commerce. Preceding the dinner there was an automobile parade, 60 cars, which traversed a route of several miles through the principal business streets of the city. Music was furnished by the band from the Collinwood shops of the New York Central. President Smith made the principal speech at the dinner, a lucid setting forth of the intimate, important and friendly relations between the city of Toledo and the New York Central lines. During a single month the interchange of cars between the New York Central and the other roads at Toledo amounted to 100,000 cars. The eastbound freight movement out of Toledo is about 60 per cent greater than that out of South Bend, the next important point west of Toledo. The New York Central is now spending about \$500,000 on improvements in which Toledo is especially interested.

Vice-President Crowley made a brief address, outlining the proposal of the New York Central to establish a new through east and west line across northern Pennsylvania, utilizing the lines of the Central of New Jersey, as recently described in the *Railway Age*.

The spirit of the meeting gave continual evidence of an intelligent and friendly spirit of co-operation between shipper and carrier. This idea was well set forth by Mayor Brough, Messrs. Macomber, Cowell, E. H. Cady, and others.

### Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

- AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City. Exhibit by Air Brake Appliance Association.
- AIR BRAKE APPLIANCE ASSOCIATION.—Joseph Sinkler, Pilot Packing Company, 122 South Michigan Ave., Chicago. Meeting with Air Brake Association.
- AMERICAN ASSOCIATION OF DINING CAR SUPERINTENDENTS.—L. A. Stone, C. & E. I. Ry., Chicago.
- AMERICAN ASSOCIATION OF ENGINEERS.—C. E. Drayer, 63 E. Adams St., Chicago.
- AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—Grant Williams, 1341 Railway Exchange, Chicago. Annual convention, October 23, St. Louis, Mo.
- AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 So. Michigan Ave., Chicago. Next meeting, June 3, 1924, Montreal, Canada.
- AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.
- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothchild, Room 400, Union Station, St. Louis, Mo. Next meeting, June 18-20, 1924, Buffalo, N. Y.
- AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 8 W. 40th St., New York. Next convention, October 8-12, Atlantic City, N. J.
- AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borchardt, 202 North Hamlin Ave., Chicago, Ill.

**AMERICAN RAILWAY ASSOCIATION.**—J. E. Fairbanks, General Secretary, 30 Vesey St., New York, N. Y.  
Division I.—Operating, J. C. Caviston, 30 Vesey St., New York, N. Y.

Freight Station Section (including former activities of American Association of Freight Agents).—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association).—J. C. Caviston, 30 Vesey St., New York, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Telegraph and Telephone Section (including former activities of the Association of Railway Telegraph Superintendents).—W. A. Fairbanks, 30 Vesey St., New York, N. Y.

Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago, Ill.

Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York, N. Y.

Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Next annual meeting, March 11-13, 1924, Chicago. Exhibit by National Railway Appliances Association.

Construction and Maintenance Section.—E. H. Fritch.

Electric Section.—E. H. Fritch.

Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York, N. Y. Next meeting November 14, Hotel Pennsylvania, New York. Annual meeting, March 13 and 14, 1924, Chicago.

Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill.

Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill.

Division VI.—Purchases and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y.

Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill. Next convention, April, 1924, New Orleans, La.

Car Service Division.—C. A. Buch, 718 18th St., N. W., Washington, D. C.

**AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.**—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Next convention, October 16-18, Hotel Gowman, Seattle, Wash. Exhibit by Bridge and Building Supply Men's Association.

**AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.**—W. H. Hill, Agricultural Agent, New York Central, Chicago. Semi-annual meeting, December 6 and 7, Chicago; annual meeting, May 14-16, 1924, Savannah, Ga.

**AMERICAN RAILWAY ENGINEERING ASSOCIATION.**—(Works in co-operation with the American Railway Association, Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Next annual meeting, March 11-13, 1924, Chicago. Exhibit by National Railway Appliance Association.

**AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION.**—(See American Railway Association, Division V.)

**AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—W. C. Stephenson, Atlantic Coast Line R. R., Rocky Mount, N. C. Exhibit by Supply Association of the American Railway Tool Foremen's Association.

**AMERICAN SHORT LINE RAILROAD ASSOCIATION.**—T. F. Whittelsey, Union Trust Building, Washington, D. C.

**AMERICAN SOCIETY FOR STEEL TREATING.**—W. H. Eisenman, 4600 Prospect Ave., Cleveland, Ohio. Annual convention, October 8-12, William Penn Hotel, Pittsburgh, Pa.

**AMERICAN SOCIETY FOR TESTING MATERIALS.**—C. L. Warwick, 1315 Spruce St., Philadelphia, Pa.

**AMERICAN SOCIETY OF CIVIL ENGINEERS.**—Prof. J. H. Dunlap, 33 W. 39th St., New York. Regular meetings 1st and 3d Wednesdays in month, except July and August, 33 W. 39th St., New York.

**AMERICAN SOCIETY OF MECHANICAL ENGINEERS.**—Calvin W. Rice, 29 W. 39th St., New York.

**Railroad Division.**—A. F. Stuebing, Bradford Draft Gear Co., 23 W. 43rd St., New York.

**AMERICAN TRAIN DISPATCHERS' ASSOCIATION.**—C. L. Darling, 1310-1311 Mallers Bldg., Chicago, Ill.

**AMERICAN WOOD PRESERVERS' ASSOCIATION.**—P. R. Hicks, Room 1146 Otis Bldg., Chicago. Next convention, January 15-17, 1924, Muehlebach Hotel, Kansas City, Mo.

**ASSOCIATION OF RAILWAY CLAIM AGENTS.**—H. D. Morris, Northern Pacific Ry., St. Paul, Minn. Next annual meeting, May, 1924, West Baden, Ind.

**ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.**—Jos. A. Andreuccetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago. Annual convention, November 6-9, Hotel La Salle, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.

**ASSOCIATION OF RAILWAY EXECUTIVES.**—Stanley J. Strong, 320 Munsey Bldg., Washington, D. C.

**ASSOCIATION OF RAILWAY SUPPLY MEN.**—A. W. Clokey, 1658 McCormick Bldg., Chicago. Meeting with International Railway General Foremen's Association.

**ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS.**—(See American Railway Association, Division I.)

**ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.**—(See American Railway Association, Division II.)

**BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.**—John Nelson, Joseph E. Nelson & Sons, 3240 South Michigan Ave., Chicago. Meeting with convention of American Railway Bridge and Building Association.

**CANADIAN RAILWAY CLUB.**—W. A. Booth, 53 Rushbrook St., Montreal, Que.  
**CAR FOREMEN'S ASSOCIATION OF CHICAGO.**—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.

**CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.**—Thomas B. Keeneke, 604 Federal Reserve Bank Bldg., St. Louis, Mo. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.

**CENTRAL RAILWAY CLUB.**—Harry D. Vought, 26 Cortlandt St., New York. Meetings, 2d Thursday, January to November, Hotel Iroquois, Buffalo, N. Y. Interim meetings, 2d Thursday, February, April, June, Hotel Statler, Buffalo, N. Y. Jubilee dinner, January 9, Hotel Statler.

**CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.**—W. P. Elliott, Terminal Railroad Association of St. Louis, East St. Louis, Ill.

**CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.**—D. B. Wright, 34th St. and Artesian Ave., Chicago, Ill. Meeting with Chief Interchange Car Inspectors' and Car Foremen's Association.

**CINCINNATI RAILROAD CLUB.**—W. C. Cooder, Union Central Bldg., Cincinnati, Ohio. Meetings, 2d Tuesday in February, May, September and November.

**DIXIE RAILWAY CLUB.**—T. C. Schley, 71 Conti Street, Mobile, Ala. Regular meetings, bi-monthly, second and fourth Fridays, Battle House Hotel, Mobile, Ala.

**EASTERN RAILROAD ASSOCIATION.**—E. N. Bessling, 614 F St., N. W., Washington, D. C.

**FREIGHT CLAIM ASSOCIATION.**—(See American Railway Association, Division VII.)

**GENERAL SUPERINTENDENTS' ASSOCIATION OF CHICAGO.**—C. H. Treichel, Grand Central Station, Chicago. Regular meetings, Wednesday, preceding 3rd Friday in month, Room 1414 Manhattan Bldg., Chicago.

**INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.**—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Annual convention, 1924, Chicago. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.

**INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.**—George P. White, 747 Railway Exchange, Chicago. Meeting with International Railroad Master Blacksmiths' Association.

**INTERNATIONAL RAILWAY FUEL ASSOCIATION.**—J. B. Hutchison, 6000 Michigan Ave., Chicago. Next convention, May 26-29, 1924, Hotel Sherman, Chicago. Exhibit by International Railway Supply Men's Association.

**INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.**—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn.

**INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.**—Bard Browne, Superheater Co., 17 E. 42nd St., New York. Meeting with International Railway Fuel Association.

**MASTER BOILER MAKERS' ASSOCIATION.**—Harry D. Vought, 26 Cortlandt St., New York. Next convention, May 20-23, 1924, Hotel Sherman, Chicago.

**MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION.**—(See A. R. A., Division V.)

**MASTER CAR BUILDERS' ASSOCIATION.**—(See A. R. A., Division V.)

**NATIONAL ASSOCIATION OF RAILWAY TIE PRODUCERS.**—J. S. Penney, T. J. Moss Tie Company, St. Louis, Mo. Next convention, January 17-18, 1924, Muehlebach Hotel, Kansas City, Mo.

**NATIONAL ASSOCIATION OF RAILWAY AND UTILITIES COMMISSIONERS.**—James B. Walker, 49 Lafayette St., New York. Next convention, Dec. 4, 1923, Miami, Fla.

**NATIONAL FOREIGN TRADE COUNCIL.**—O. K. Davis, 1 Hanover Square, New York.

**NATIONAL RAILWAY APPLIANCE ASSOCIATION.**—C. W. Kelly, People's Gas Bldg., Chicago. Annual exhibition at convention of American Railway Engineering Association.

**NATIONAL SAFETY COUNCIL.**—W. H. Cameron, 168 North Michigan Ave., Chicago.

**NEW ENGLAND RAILROAD CLUB.**—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2d Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

**NEW YORK RAILROAD CLUB.**—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 3rd Friday in month, except June, July and August, at 29 W. 39th St., New York. Annual dinner, December 6, Hotel Commodore, New York.

**PACIFIC RAILWAY CLUB.**—W. S. Wellner, 64 Pine St., San Francisco, Cal. Regular meetings, 2d Thursday in month, alternately in San Francisco and Oakland.

**RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.**—E. R. Woodson, 1116 Woodward Building, Washington, D. C.

**RAILWAY BUSINESS ASSOCIATION.**—Frank W. Noxon, 600 Liberty Bldg., Broad and Chestnut Sts., Philadelphia, Pa. Annual meeting and dinner, November 8, Hotel Commodore, New York.

**RAILWAY CLUB OF PITTSBURGH.**—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in month, except June, July and August, Fort Hotel, Pittsburgh, Pa.

**RAILWAY DEVELOPMENT ASSOCIATION.**—(See Am. Ry. Development Assn.)

**RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.**—J. Scribner, General Electric Co., Chicago. Annual meeting with Association of Railway Electrical Engineers.

**RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.**—H. A. Varney, Sunbeam Electric Manufacturing Co., Evansville, Ind. Meeting with Traveling Engineers' Association.

**RAILWAY FIRE PROTECTION ASSOCIATION.**—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 16-18, Cleveland Hotel, Cleveland, Ohio.

**RAILWAY REAL ESTATE ASSOCIATION.**—R. H. Morrison, C. & O. Ry., Richmond, Va.

**RAILWAY SIGNAL ASSOCIATION.**—(See A. R. A. Division IV, Signal Section.)

**RAILWAY STOREKEEPERS' ASSOCIATION.**—(See A. R. A. Division VI.)

**RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.**—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meeting with A. R. A. Division V.

**RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.**—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A. Division I.

**RAILWAY TREASURY OFFICERS' ASSOCIATION.**—L. W. Cox, Commercial Trust Bldg., Philadelphia, Pa. Annual meeting, October 25 and 26, William Penn Hotel, Pittsburgh, Pa.

**ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.**—P. J. McAndrews, C. & N. W. Ry., Sterling, Ill. Exhibit by Track Supply Association.

**ST. LOUIS RAILWAY CLUB.**—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2d Friday in month, except June, July and August.

**SIGNAL APPLIANCE ASSOCIATION.**—F. W. Edmunds, Sunbeam Electric Manufacturing Company, New York City. Meeting with American Railway Association, Signal Section.

**SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.**—A. J. Merrill, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3d Thursday in January, March, May, July, September and November, Piedmont Hotel, Atlanta.

**SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.**—J. L. Carrier, Car Serv. Agt., Tenn. Cent. Ry., 319 Seventh Ave., North Nashville, Tenn.

**SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—H. S. White, 9 N. Jefferson St., Chicago.

**TRACK SUPPLY ASSOCIATION.**—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association.

**TRAVELING ENGINEERS' ASSOCIATION.**—W. O. Thompson, 1177 East 98th St., Cleveland, Ohio. Exhibit by Railway Equipment Manufacturers' Association.

**WESTERN RAILWAY CLUB.**—Bruce V. Crandall, 605 North Michigan Ave., Chicago. Regular meetings, 3d Monday each month, except June, July and August.

**WESTERN SOCIETY OF ENGINEERS.**—Edgar S. Nethercut, 1735 Monadnock Bldg., Chicago, Ill.



## Traffic News

The Baltimore & Ohio has moved its traffic and operating offices in New York City from 295 Broadway and 2 Broadway, to the Cunard Building, 25 Broadway.

The Terminal Railroad Association of St. Louis, Mo., established a new record by interchanging 3,923,980 cars during the past 12 months, compared with 3,234,204 cars during the previous year.

The railroads centering in Charleston, W. Va., have made reductions in the freight rates on coal shipped to that city from the mines, which it is estimated will afford the industries of the city material relief.

Great Northern freight loadings during August totaled 124,497 cars, compared with 107,282 during the corresponding month of 1922. Ore loadings, which were 30 per cent higher than during August of 1922, constituted a large part of the increase.

To facilitate the movement of potatoes, the Colorado Public Utilities Commission has granted the Denver & Rio Grande Western permission to attach empty or loaded potato cars to two of its passenger trains running between Salida, Colo., and Alamosa, during the peak of the potato season.

According to the California State Department of Agriculture, shipments of fruit from that state to eastern markets this year have exceeded 31,900 cars (up to September 26) compared with a total of 21,780 cars during 1922. It is estimated that 20,000 additional cars will be shipped before the season closes.

Railroads operating in Idaho, which were ordered by the Idaho Public Utilities Commission to reduce their freight rates on pine logs, have filed a petition with that commission for a rehearing. The case was brought by the Western Pine Manufacturers' association. The roads contend that the rates are already too low for profit.

The Peoria Association of Commerce, Peoria, Ill., has adopted a resolution opposing any amendment to the Transportation Act of 1920 at the coming session of Congress and favoring a continuance of the existing laws for at least another two-year period. Copies of the resolution have been sent to the United States senators and congressmen from the state of Illinois and to state representatives.

The Long Island Railroad carries something besides the millions of pleasure seekers and others who board its passenger trains; from July 1 to September 15, it took 2,450 carloads of potatoes—1,633,500 bushels—out of Suffolk County. This is more than 75 per cent above the record of 1922. From Suffolk and two other counties, the company expects this year to take out over 7,000,000 bushels. Long Island farmers raise about 225 bushels of potatoes to the acre.

The Western Association of General Baggage Agents, which was organized 25 years ago, held its semi-annual meeting on September 21 at Denver, Colo. The association covers the territory from Chicago to the Pacific coast and from Canada to Mexico. The program of the meeting included a study of the right way of handling baggage in the best interests of the traveling public. The aim of the general baggage agents is to have all trunks and other baggage at destination as soon as the passenger arrives.

Representative Rogers of Massachusetts has announced his intention of introducing a bill at the next session of Congress declaring a permanent embargo on the exportation from the United States of anthracite coal; and in the meantime he has written a letter to the Interstate Commerce Commission proposing, as a brake upon excessive exportation of coal to Canada until an embargo can be put in force, an adjustment of freight rates to protect domestic consumers within the United States from

dangers of coal shortage. Mr. Rogers says that exports of anthracite to Canada from October 1, 1922, to April 30, 1923, amounted to 2,686,031 tons. In response to newspaper inquiries as to the President's attitude on this subject, it was stated at the White House that Mr. Coolidge had not considered the matter, but thought that it would probably be one of considerable delicacy and require careful consideration as to the advantages that might result.

### Ford Company Asks Reopening of Assigned Car Case

The Ford Motor Company has petitioned the Interstate Commerce Commission for a reopening for further hearing of the assigned car case and for a vacation or modification of the commission's order, effective on November 1, prohibiting the assignment of privately-owned cars to coal mines in excess of the pro rata share of such mines of the total car supply. The company said in its petition that continuance of the order will have a widespread effect upon the price at which it will be able to market its products, which are said to be sold "at an extremely low price." The petition points out that the company is a very large consumer of bituminous coal and that, relying upon the assumption that the use of privately-owned coal cars had been definitely settled, had purchased 1,004 standard steel hopper bottom coal cars at an expense of \$1,807,200. The company had followed the hearings in the assigned car case and, the petition says, the general discussion and the trend of the testimony warranted it in the belief that its privately-owned coal cars were not in any way the object of the commission's interest. "The order discourages the purchase of equipment by private concerns," the petition continued, "and means just so much less equipment at the disposal of the railroads for transportation purposes; and the curtailment of production which must inevitably take place in the event that this order is permitted to remain effective will affect not only the petitioner, but the communities in which petitioner, its branches, factories and subsidiaries are located."

### Reduction in Freight Rates Urged on President

President Coolidge continues to be urged from various sources to do something to reduce freight rates for the benefit of the farmers. A committee of bankers, farmers and members of Congress of the North Middle West at a conference with him on September 27 urged, among other things, a reduction of rates on wheat and flour. The Federal Trade Commission on September 28 submitted a report to the President and Congress on costs and profits in the grain trade in which it suggested that a reduction in freight rates and more direct shipments "are desirable." In a previous volume of its report on the same subject the commission had recommended the operation of public terminal elevators by railroad companies as an adjunct to the transportation service. Representative Martin L. Davey of Ohio has made public a letter he had addressed to the President stating that what the farmers need is a reduction of at least 25 per cent in freight rates on everything they buy and sell; and he added that it would be highly desirable if this reduction could be made 35 or 40 per cent. The loss in revenue to the railroads, he said, could be offset by increasing the rates on "luxuries" of all kinds.

Regarding a newspaper story that the President would recommend to Congress a repeal of Section 15-a of the Transportation Act, it was stated officially at the White House on September 28 that the President had not yet given any special consideration to the subject and while he had conferred generally on railroad matters with railroad presidents, labor leaders and others, he had come to no definite conclusions as to any course of action.

Chairman Hooper of the Railroad Labor Board called on the President on October 1. President W. L. Mapother, of the Louisville & Nashville, also called on the President on September 27, and Howard Elliott, chairman of the Northern Pacific, on October 2. The President inquired of Mr. Elliott regarding the business situation in the Northwest and was told that in general the car supply is ample but that there is a possibility of some shortage west of the Rocky Mountains. He also inquired regarding the possibility of helping the wheat regions by some reduction in the export rates on grain. It was stated that Mr. Elliott thought such a step might be helpful.

## Equipment and Supplies

### Locomotives

THE SOUTHERN PACIFIC is inquiring for about 60 locomotives.

THE PENNSYLVANIA POWER & LIGHT COMPANY, Wilkes-Barre, Pa., has ordered 1, six-wheel switching locomotive from the Baldwin Locomotive Works.

### Freight Cars

THE ULSTER & DELAWARE is inquiring for 10 caboose cars.

THE ST. LOUIS-SAN FRANCISCO is inquiring for 2,500 ventilated refrigerator cars.

THE SOUTHERN PACIFIC contemplates coming in the market soon for a large number of freight cars.

THE BALTIMORE & OHIO has inquiries out for 400 hopper car bodies and 100 box car bodies, to be used on old trucks from dismantled cars.

THE UNION PACIFIC, reported in the *Railway Age* of September 15 as inquiring for 25 caboose cars, will have these cars built at the shops in Albina, Ore.

THE SOUTH AUSTRALIAN RAILWAYS, reported in the *Railway Age* of September 29 as inquiring for 600 freight cars, are also inquiring for 500 steel box cars and 100 steel covered cars.

### Passenger Cars

THE ERIE has placed an order for 2 gasoline motor cars for passenger service, with the Service Motor Truck Company, Wabash, Ind.

### Iron and Steel

THE CENTRAL OF NEW JERSEY is inquiring for 250 tons of steel for bridges.

THE HOCKING VALLEY has given a contract for 5,400 tons of new rail, for delivery during April and May, 1924, to the Carnegie Steel Company.

THE ILLINOIS CENTRAL is inquiring for 135 tons of structural steel consisting of one 85-ft. and two 56-ft. deck plate girder spans for use at Madisonville, Ky.

THE CHESAPEAKE & OHIO has given contracts for supplying a total of 30,000 tons of new rail during the first six months of 1924, to the Illinois Steel Company, the Inland Steel Company and the Bethlehem Steel Company.

The following railroads placed orders recently for rail with the United States Steel Corporation interests: FLORIDA EAST COAST 5,500 tons; ALABAMA & VICKSBURG 4,500 tons, and ATLANTA, BIRMINGHAM & ATLANTIC 2,000 tons.

THE NEW YORK CENTRAL, reported in the *Railway Age* of September 29, as inquiring for 400 tons of structural steel for bridges, has placed orders for a total of about 450 tons. The Bethlehem Steel Bridge Company has orders for 250 tons, the Mt. Vernon Bridge Company 120 tons and the McClintic-Marshall Company about 50 tons.

THE BALTIMORE & OHIO has placed orders for 50,000 tons of steel rail, to be delivered during 1924, as follows: Carnegie Steel Company 25,000 tons; Illinois Steel Company 4,000 tons; Cambria Steel Company 10,000 tons; Inland Steel Company 3,000 tons, and Bethlehem Steel Company 8,000 tons. All of the above is for 100 lb. rail except 5,000 tons of 130 lb. It is expected that delivery will commence early in the year and be completed during the first six months. Orders were also placed with the Inland Steel Company for 2,000 tons of rail for the Baltimore & Ohio Chicago Terminal Railroad, at Chicago.

### Machinery and Tools

THE CHICAGO, BURLINGTON & QUINCY is inquiring for one motor driven Universal grinding machine.

THE CHESAPEAKE & OHIO has placed an order with the Industrial Works, Bay City, Mich., for six 150-ton self-propelling steam wrecking cranes.

### Signaling

THE MICHIGAN CENTRAL has ordered from the Hall Switch & Signal Company, 26 universal crossing lamps, flasher type; 10 semaphore signals, style L, and other material for use on its lines in the United States and in Canada.

THE WABASH RAILWAY has ordered from the Union Switch & Signal Company semaphore signals, style S, for use in installing the automatic block system on its line between Harlem, Mo., and Birmingham, Mo., seven miles. In this territory the Wabash and the Chicago, Burlington & Quincy use their two single track lines jointly, the Wabash line for eastbound movement and the Burlington for westbound.

### Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company has awarded a contract to Robert E. McKee, El Paso, Tex., for the construction of a new pipe and tin working shop at San Bernardino, Cal., reported in the *Railway Age* of August 18.

CANADIAN NATIONAL.—This company contemplates the construction of a branch from Brule, Alta., to Grand Prairie, to give access to new coal fields and the wheat belt in the Peace river region. A surveying party is now in the field.

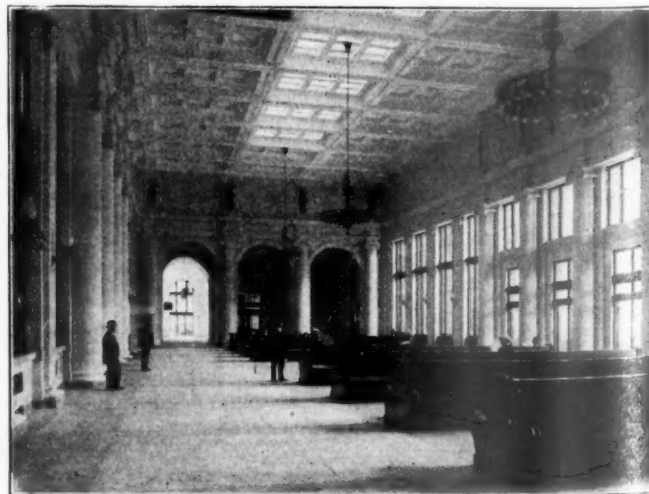
LOUISVILLE & NASHVILLE.—This company will construct a freight station at Covington, Ky., to cost approximately \$120,000.

MISSOURI PACIFIC.—This company will construct an addition to the passenger station at Wagoner, Okla., to cost approximately \$11,500.

THE TOLEDO, ST. LOUIS & WESTERN.—This company has awarded a contract to Bierd, Lydon & Grand Pre, Chicago, for the construction of a 27-stall engine house and other engine terminal facilities at Frankfort, Ind., to cost approximately \$300,000.

UNION PACIFIC.—This company has awarded a contract to the Graver Corporation, East Chicago, Ind., for the erection of two 10,000 gal. per hour water softening plants at Fossil, Wyo., and Arden, Nev.

UNION PACIFIC.—This company has closed bids for the construction of a new passenger station at Laramie, Wyo., reported in the *Railway Age* of September 1, and will proceed with the excavation work within the next 30 days. It is estimated that the new station will cost approximately \$175,000.



Interior of C. P. R. Station at Vancouver



## Supply Trade News

The American Steel & Wire Company has purchased 130 acres of land at Gary, Ind., on which it will construct a new plant.

E. H. Batchelder, Jr., has been appointed special representative of the Lundie Engineering Corporation, New York, with headquarters at Chicago.

John Baker, of the mechanical department of the Chicago, Rock Island & Pacific, has been appointed vice-president of the Locomotive Firebox Company, with headquarters at Chicago.

Milton C. Fidgeon, who has served for a number of years with Joseph T. Ryerson & Son, Inc., Chicago, has been appointed eastern machinery sales manager, with office at 30 Church street, New York City.

R. R. Lally, formerly of Baltimore, Md., has been appointed manager of sales of the Globe Steel Tubes Company, Chicago, in charge of eastern territory with headquarters at 110 East Forty-second street, New York City, and A. A. Loeffler has been appointed manager of sales in charge of Michigan territory with headquarters at 5-169 General Motors building, Detroit, Mich.

The Clark Car Company, of Pittsburgh, Pa., has appointed B. K. Mould, eastern manager with headquarters at 2107 Woolworth building, New York City. Mr. Mould formerly spent thirteen years with the Westinghouse Electric & Manufacturing Company, of East Pittsburgh, Pa., and later several years as eastern sales manager, condenser department of the Elliott Company, Jeannette, Pa.

John Knox Nimock has been appointed assistant purchasing agent of the American Car & Foundry Company, New York. Mr. Nimock was born in Ireland and came to the United

States in 1894. He received his education in the Southern Illinois Normal University at Carbondale, Ill., in return for which he taught in the public schools of the state. After taking up a business course he entered the service of the American Car & Foundry Company at St. Louis, Mo., in 1904, and was transferred to New York in 1918. Mr. Nimock started work with the American Car & Foundry Company as a stenographer and has been steadily advanced until he now becomes assistant purchasing agent, with headquarters at New York City.

The Selflock Nut & Bolt Co., Inc., East Syracuse, N. Y., manufacturers of friction fit nuts and bolts, have entered into a contract with the Bethlehem Steel Company, Bethlehem, Pa., operative at once, for the manufacture and sale of carriage and machine bolts, track bolts and heavy railway nuts and bolts. The Selflock Company will increase its own facilities and specialize on S. A. E. Selflock products, as well as cap screws with Selflock threads.

Loyall A. Osborne, president of the Westinghouse Electric International Company, New York, has started on a trip to Japan to confer with prominent industrialists in Tokio. He will sail from San Francisco on October 10, arriving in Tokio about October 28. Mr. Osborne is vice-chairman of the

National Industrial Conference Board, and a member of the Imperial Order of the Rising Sun of Japan. Mr. Osborne is accompanied to Japan by Gen. Guy E. Tripp, chairman of the Westinghouse Electric & Manufacturing Company.

John B. Wright, assistant district manager of the Westinghouse Air Brake Company, Wilmerding, Pa., has been appointed assistant to vice-president with headquarters at the



J. B. Wright

general offices in Wilmerding, Pa. He will also retain the title of assistant district manager in charge of the company's commercial activities in the Pittsburgh district which he has held since January, 1920. Mr. Wright was born on July 27, 1875, at Pleasantville, Pa., and was educated in the public schools of his native town and at Central State Normal School, Lock Haven, Pa., graduating in 1896. He worked for about 18 months with the Cambria Steel Company at Johnstown, Pa.

In February, 1899, he entered the service of the Westinghouse Air Brake Company at Wilmerding, as a clerk in the engineering department. After serving for some time as chief clerk in that department he was transferred to the general office in charge of engineering correspondence and subsequently was made assistant to the vice-president. In May, 1919, he was appointed assistant southeastern manager and in January, 1920, was made assistant district manager.

### Consolidation of General and

### Federal Signal Companies

The General Railway Signal Company of Rochester, N. Y., following a meeting of its directors in Rochester on September 28, announced that it had acquired control of the Federal Signal Company; and that the president, vice-president and Director Frederick Pruyn of the Federal will take positions in the General. The Federal will continue to exist as a holding company, but all of its properties, business and obligations will be taken over by the enlarged company.

A. H. Renshaw, president of the Federal, will become a director and vice-president of the General. Paul Renshaw, vice-president and general manager, will become sales manager of the General. Mr. Pruyn will be a director. The signal manufacturing business will be concentrated at the extensive shops of the General Company in Rochester.

The directors, following their meeting at Rochester, announced that Merrill, Lynch & Co., 120 Broadway, New York City, had been engaged to act as fiscal agents.

The present directors of the General Railway Signal Company are William Bausch, John N. Beckley, C. V. Edwards, T. W. Finucane, C. R. Huntley, C. H. Littell, D. J. Kenefick, W. A. Matson, Edward G. Miner, D. M. Richards, Robert K. Root, F. W. Yates, F. W. Zoller, George D. Morgan, W. W. Salmon. Messrs. Salmon and Morgan are the president and vice-president, respectively, of the General Railway Signal Company.

The General Railway Signal Company was incorporated June 13, 1904, succeeding the Taylor Signal Company, of Buffalo, and the Pneumatic Signal Company, of Rochester. The Buffalo plant was subsequently disposed of. The outstanding stock of the General consists of \$3,000,000 common and \$2,000,000 preferred. The funded debt, consists of \$950,000 6 per cent gold bonds to the amount of \$950,000.

The Federal Railway Signal Company was organized in 1905 by the owners of the former Standard Railroad Signal Company, and was reorganized in 1908 as the Federal Signal Company. The capitalization of the Federal at present consists of first preferred stock, \$275,000; second preferred stock, \$600,000; and common stock, \$1,400,000.



J. K. Nimock

## Railway Financial News

**BALTIMORE & OHIO.—Annual Report.**—This company's report for 1922 is reviewed in an article on another page of this issue entitled "Baltimore & Ohio Common Dividend Restored."

**CAPE GIRADEAU & NORTHERN.—Asks Authority to Suspend Steam Operation.**—This company has applied to the Interstate Commerce Commission for authority to suspend steam operation of that part of its line between Cape Girardeau and Jackson, Mo., over which it has been operating with one locomotive, which the application says, is constantly becoming defective.

**CHICAGO & NORTH WESTERN.—Asks Authority to Draw Down Bonds.**—This company has applied to the Interstate Commerce Commission for authority for the authentication and delivery of \$7,837,000 of first and refunding mortgage bonds to reimburse the treasury for expenditures, and also \$1,440,000 of bonds for the purpose of retiring a like amount of first mortgage bonds of the Boyer Valley.

**CHICAGO, PEORIA & ST. LOUIS.—Sale Postponed.**—The sale of this road, which had been set for September 26, has been postponed to November 8 by the Circuit Court at Sangamon County, Ill.

**COLORADO & SOUTHERN.—Authorized to Abandon Branch.**—The Interstate Commerce Commission on further hearing has issued a certificate authorizing this company to abandon a branch line extending from Buena Vista to Romley, Colo., including certain trackage extending westerly from Romley, a total distance of 29.42 miles. In a previous report the commission had denied an application to abandon this branch, but the report now says that the record made at the further hearing clearly establishes that the improvement in operating results anticipated by the protestants at the first hearing has not materialized and that the operation of the line since the original application was filed has resulted in a large deficit. For 1922 operating revenues were \$5,813, operating expenses \$30,654 and taxes \$28,838. For the first five months of 1923 operating revenues were \$1,788, operating expenses \$15,401 and taxes \$12,016. In the latter part of 1922 the rate on ore to the smelter at Leadville was reduced approximately 50 cents a ton in an endeavor to increase the traffic. At the further hearing the company renewed its offer to lease the line to the shippers who had protested against its abandonment at a rental of \$5 a year provided they would operate it in its present condition; or to sell it to them for its scrap value.

**DENVER & RIO GRANDE WESTERN.—Asks Authority to Abandon Branches.**—The receiver has applied to the Interstate Commerce Commission for authority to abandon two narrow gage branches, the Calumet branch extending from Hecla Junction to Calumet, Colo., 7.13 miles, and the Blue River branch from Leadville to Dillon, Colo., 35.68 miles.

**ERIE & PITTSBURGH.—Authorized to Issue Stock.**—This company has been authorized by the Interstate Commerce Commission to issue \$1,209,350 of special stock to be guaranteed by the Pennsylvania, with dividends at 7 per cent. The stock is to be delivered to the Pennsylvania in settlement of additions and betterments.

**GULF, MOBILE & NORTHERN.—Initial Preferred Dividend.**—The directors have declared an initial dividend of \$1 on the preferred stock, payable November 15 to stock of record November 1. This dividend is available for holders of voting trust certificates representing the trusted stock. This is the first dividend on the preferred stock of the present company, which, in 1917, succeeded the New Orleans, Mobile & Chicago. The stock is entitled to 6 per cent dividends, accumulative since January 1, 1920. The preferred stock outstanding is \$11,494,400 and the common stock \$11,072,500.

**INTERSTATE.—Authorized to Issue Stock.**—The Interstate Commerce Commission has authorized this company to issue \$471,000 of stock to be sold for cash at not less than par. The company had asked for authority to issue \$1,034,006, including \$375,000 for

discharge or refunding of existing obligations and \$263,000 for the refundment of installments of equipment trust bonds paid. The commission finds, however, that the issue of the full amount would result in an excess of stock over the total investment in road and equipment and limited its authority to the amount of the issue intended for acquisition of right of way, construction completion, extension or improvement of facilities and for additions and betterments.

**NEW YORK CENTRAL.—Equipment Trusts Offered.**—A syndicate headed by J. P. Morgan & Co. is offering \$17,340,000 New York Central Lines one to fifteen-year 5 per cent equipment certificates guaranteed by the New York Central, the Cleveland, Cincinnati, Chicago & St. Louis and the Michigan Central, at prices to yield 5.25 per cent for the shortest maturity, 5½ per cent for middle maturities and 5.45 per cent for the last five maturities.

**NEW YORK, CHICAGO & ST. LOUIS.—Authorized to Issue Bonds.**—This company has been authorized to issue \$690,000 of second and improvement mortgage 6 per cent bonds to be sold at not less than 96.

**NORTHERN PACIFIC.—Asks Authority to Abandon Branch.**—This company has applied to the Interstate Commerce Commission for a certificate authorizing the abandonment of a branch line from Helena to Rimini, Mont., 15.76 miles.

**OSWEGO & SYRACUSE.—Authorized to Issue Bonds.**—This company has been authorized by the Interstate Commerce Commission to issue \$1,193,000 of first and refunding 5 per cent bonds to be delivered to the Delaware, Lackawanna & Western, lessee, in refundment of certain obligations. The Lackawanna was authorized to guarantee the bonds.

**PENNSYLVANIA-DETROIT.—Acquisition by Pennsylvania Authorized.**—The Interstate Commerce Commission has authorized the Pennsylvania to acquire control by lease of the railroad and property of this company.

**PITTSBURGH & WEST VIRGINIA.—New Director.**—Francis W. Paine, of Boston, has been elected a director of this company and the West Side Belt to fill an existing vacancy.

**READING.—Segregation Plan.**—A final decree dismissing the objection of Isaac T. and Mary W. Starr to the sale of the Lehigh & Wilkes-Barre Coal stock to the Jackson E. Reynolds syndicate of New York under the Reading segregation plan was filed by the United States District Court at Philadelphia on October 1. The decree is based upon the recent decision of the court that it would not set aside the sale for the reason the evidence showed it was made in good faith, and in conformity with the dissolution decree of the United States Supreme Court. Sixty days are allowed for an appeal from the decree.

**ST. LOUIS, TROY & EASTERN.—Asks Authority for Equipment Trust Notes.**—This company has applied to the Interstate Commerce Commission for authority to issue and guarantee \$280,000 of 6 per cent equipment trust notes to be sold to Stifel & Nicolaus Investment Company, St. Louis, at 96.

**WESTERN PACIFIC.—New Director.**—John Y. Robbins has been elected a director to fill a vacancy.

### Dividends Declared

Atchison, Topeka & Santa Fe.—Common, 1½ per cent, quarterly, payable December 1 to holders of record October 26.  
 Delaware, Lackawanna & Western.—3 per cent, quarterly, payable October 20 to holders of record October 6.  
 Georgia Railroad & Banking.—3 per cent, quarterly, payable October 15 to holders of record October 2.  
 Pittsburgh & West Virginia.—Preferred, \$1.50, quarterly, payable November 30, 1923, and February 29, 1924, to holders of record November 1, 1923, and February 1, 1924.  
 West Jersey & Seashore.—2 per cent, semi-annually, payable October 15 to holders of record October 1.

### Trend of Railway Stock and Bond Prices

	Oct. 2	Last Week	Last Year
Average price of 20 representative railway stocks .....	59.60	59.46	72.58
Average price of 20 representative railway bonds .....	81.52	81.98	88.70



## Railway Officers

### Financial, Legal and Accounting

**H. E. R. Wood**, treasurer and assistant secretary of the Chicago & Alton with headquarters at Chicago, will retire on October 1, after 51 years of railroad service.

### Operating

**H. M. Terrell** has been appointed assistant trainmaster of the Seaboard Air Line with headquarters at Norlina, N. C., and **H. H. Thomas** has been appointed assistant trainmaster with headquarters at Hamlet, N. C.

**A. T. Lowmaster** has been appointed superintendent of transportation of the Chesapeake & Ohio and not assistant superintendent of transportation, as was incorrectly reported in the *Railway Age* of September 22. Mr. Lowmaster held the latter position for six years prior to his promotion to superintendent of transportation.

**Charles Chandler**, superintendent of the Atlanta division of the Southern with headquarters at Atlanta, Ga., and **J. G. Clements**, superintendent of the C. N. O. & T. P. division, with headquarters at Somerset, Ky., have exchanged jurisdictions. **L. F. DeRamus**, superintendent of the Georgia Southern and Florida, with headquarters at Macon, Ga., has been transferred to the Danville division of the Southern with headquarters at Greensboro, N. C., succeeding **R. L. Avery**, who has been transferred to the Norfolk division with headquarters at Norfolk, Va. Mr. Avery succeeds **D. B. Nolan**, who, in turn, has succeeded Mr. DeRamus at Macon.

**J. E. Drewry**, whose promotion to superintendent of telegraph of the Illinois Central, Southern lines, and the Yazoo & Mississippi Valley was reported in the *Railway Age* of September 15, was born on December 14, 1877, at Greenfield, Tenn. He entered railway service in 1896 on the Illinois Central as telegraph operator and clerk, subsequently being promoted to agent at New River, La., and agent and operator at various stations on the Tennessee division. On August 11, 1903, he was promoted to copy operator in the dispatcher's office at Fulton, Ky., and on September 8 of that year was again promoted to night operator. Mr. Drewry was subsequently promoted to night wire



J. E. Drewry

chief and day wire chief in charge of repeaters and quad sets at Fulton, Ky. In November, 1911, he was promoted to telegraph inspector on the Southern lines of the Illinois Central and the Yazoo & Mississippi Valley, with headquarters at Memphis, Tenn. He held this position until the time of his recent promotion to superintendent of telegraph, with the same headquarters.

**C. B. Pettigrew**, whose promotion to division superintendent of the St. Louis Southwestern, with headquarters at Pine Bluff, Ark., was reported in the *Railway Age* of September 22, was born on November 21, 1886, at Franklin, Ohio. He graduated from Purdue university in 1909, after having spent his vacations since May, 1904, as section laborer and in the maintenance of way department of the Cleveland, Cincinnati,

Chicago & St. Louis. In June, 1909, he was appointed ballast inspector on the Missouri Pacific, being subsequently promoted to assistant engineer, roadmaster and division engineer. In April, 1916, Mr. Pettigrew was appointed division engineer of the Missouri-Kansas-Texas, which position he held until December, 1919, when he was promoted to trainmaster. He entered the service of the St. Louis Southwestern in April, 1920, as division engineer, with headquarters at Pine Bluff, Ark., and was holding this position at the time of his recent promotion to division superintendent.

### General Manager Appointed for Alaska Railroad

The Secretary of the Interior has appointed **Lee H. Landis**, of San Francisco, as general manager of the Alaska Railroad, effective on October 1. The appointment of Mr. Landis is a result of the decision of the Secretary of the Interior, now that actual construction of the road has been completed, to place an active and experienced railroad man in charge of its operation. Mr. Landis has been in the transportation business for 30 years. He has served as station agent and train dispatcher on the Philadelphia & Reading; towerman on the Chicago, Burlington & Quincy; general agent of operating and traffic departments on the Atchafalaya, Topeka & Santa Fe; general operating agent on the Southern Pacific; general manager of the



L. H. Landis

Phoenix & Buckeye; general manager of the Ocean Shore; assistant to president of the Tidewater Southern; president and general manager of the San Jose; and general manager of the Fresno Interurban. Mr. Landis was a major in the engineering corps and served for two years in Europe in various capacities as chief transportation officer of military districts of the American Expeditionary Forces. Since the close of the war he has been industrial commissioner of the Western Pacific with headquarters at San Francisco. He is now a lieutenant-colonel in the Engineer Reserve Corps of the Army.

### Traffic

**R. B. Sims** has been appointed freight claim agent of the Delaware & Hudson with headquarters at Albany, N. Y., succeeding **W. L. Schneider**, resigned.

**Southworth Lancaster** has been appointed foreign freight agent of the Boston & Albany with headquarters at Boston, Mass., succeeding **L. H. Peters**, resigned.

**N. Moore**, assistant general agent of the Southern at Rectortown, Va., has been promoted to general live stock agent at Atlanta, Ga., succeeding **F. L. Word**, deceased. Mr. Moore is a native of Clarke county, Virginia, and entered the Southern's service December 28, 1901, as extra telegraph operator on the Washington division. He was later promoted as follows: operator, Weyburn, Va., December 1, 1904; agent-operator, Bristow, Va., August 1, 1906; agent-operator Rectortown, Va., January 7, 1908; assistant general agent, Rectortown, June 1, 1915.

**C. D. Quinn**, whose promotion to general freight agent of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in the *Railway Age* of September 15, was born at Louisville, Ky., and entered railway service on March 16, 1895, as a stenographer in the traffic department of the Louisville & Nashville. He later served successively as rate clerk, chief rate clerk and chief clerk in the rate department, and on October 1, 1919, was promoted to assistant general freight agent, with headquarters at Louisville. In December,

1921, Mr. Quinn was promoted to assistant to the vice-president in charge of traffic, and held this position until his recent promotion to general freight agent.

**F. E. Scott**, whose promotion to assistant general freight agent of the Southern Pacific, with headquarters at Los Angeles, Cal., was reported in the *Railway Age* of August 11, was born on April 27, 1887, at Glasgow, Scotland. He entered railway service on November 8, 1908, in the passenger department of the Southern Pacific and from that time to September, 1916, held various positions in the passenger, accounting and freight traffic departments, being finally appointed chief clerk to the freight traffic manager. He was promoted to district freight and passenger agent, with headquarters at Salt Lake City, Utah, in September, 1916. In February, 1918, he was appointed chief clerk in the consolidated freight traffic departments of the Southern Pacific, the Western Pacific and the Tidewater Southern & Deep Creek. He was promoted to general agent, with headquarters at Cincinnati, Ohio, in February, 1920, and in April, 1922, was again promoted to special agent and assistant director of traffic, with headquarters at New York. Mr. Scott was serving in this capacity at the time of his recent promotion to general freight agent, with headquarters at Los Angeles, Cal.

### Engineering, Maintenance of Way and Signaling

**J. F. McCurdy**, assistant division engineer of the St. Louis Southwestern, with headquarters at Pine Bluff, Ark., has been promoted to division engineer, with the same headquarters, succeeding **C. B. Pettigrew**, whose promotion to division superintendent was reported in the *Railway Age* of September 22.

**R. H. Howard**, who has been appointed chief engineer of the Wabash, with headquarters at St. Louis, Mo., was born on August 15, 1870, at Zanesville, Ohio. He entered railway service in October, 1889, as a draftsman on the Cincinnati & Muskingum Valley and was later promoted successively to assistant in the engineering department, chief clerk to the engineer maintenance of way and assistant engineer. In April, 1901, he was appointed assistant in the engineering department of the Pittsburgh, Cincinnati, Chicago & St. Louis and in July, 1902, was appointed assistant engineer of the St. Louis division of the Vandalia. Mr. Howard was appointed principal assistant engineer in charge of construction and improvements on the Chicago & Eastern Illinois in April, 1905, and in October of that year was promoted to engineer maintenance of way, in charge of all maintenance and construction work. From May, 1910, until January, 1911, he was engaged in special engineering work in connection with railroad properties for eastern financial interests. In January, 1911, he was appointed engineer maintenance of way of the New Orleans Great Northern, in charge of construction and maintenance. He was promoted to general manager in June, 1911, and held this position until May, 1915, when he was appointed chief engineer maintenance of way of the Wabash, with headquarters at St. Louis, Mo. Mr. Howard was holding this position at the time of his recent promotion to chief engineer, with the same headquarters.

**A. O. Cunningham**, chief engineer of the Wabash, with headquarters at St. Louis, Mo., has been appointed consulting engineer, with the same headquarters. **R. H. Howard**,

chief engineer maintenance of way, with headquarters at St. Louis, has been promoted to chief engineer in charge of construction, maintenance of way and other engineering departments, with the same headquarters, succeeding Mr. Cunningham, the departments in charge of the chief engineer and the chief engineer maintenance of way having been consolidated. **M. F. Longwill**, division engineer of the Detroit division, with headquarters at Montpelier, Ohio, has been promoted to assistant chief engineer of the Eastern district, with headquarters at St. Louis, Mo. **J. J. Baxter**, division engineer of the Peru division, with headquarters at Peru, Ind., has been promoted to assistant chief engineer of the Western district, with headquarters at St. Louis.

**R. L. Longshore**, assistant engineer, has been promoted to division engineer of the Detroit division and Detroit terminals of the Wabash, with headquarters at Montpelier, Ohio, succeeding Mr. Longwill. **H. O. Kelley**, division engineer of the Western division, with headquarters at Moberly, Mo., has been transferred to the Peru division, with headquarters at Peru, Ind., in place of Mr. Baxter. **J. T. Vitt**, division engineer of the Springfield division, with headquarters at Springfield, Ill., has been transferred to the Western division, relieving Mr. Kelley. **W. R. Bennett**, assistant engineer of the Western division, with headquarters at Moberly, Mo., has been promoted to division engineer of the Springfield division, succeeding Mr. Vitt. **F. C. Huntsman**, assistant engineer of the Springfield division, with headquarters at Springfield, Ill., has been transferred to the Western division, in place of Mr. Bennett. **J. C. Bousfield**, supervisor, with headquarters at St. Louis, Mo., has been promoted to assistant engineer of the Springfield division, with headquarters at Springfield, Ill., succeeding Mr. Huntsman. **R. D. Copeland** has been appointed assistant engineer, with headquarters at Moberly, Mo. **F. V. Marshall** has been appointed assistant engineer of the Decatur division, with headquarters at Decatur, Ill., and **C. E. Robinson** has been appointed assistant engineer of the Peru division, with headquarters at Peru, Ind.

### Special

**W. F. Kusch**, formerly of the dining car department of the Chicago, Milwaukee & St. Paul, has been appointed manager of dining cars of the Southern with headquarters at Washington, D. C. **J. H. Wingfield** has been appointed superintendent of dining cars, Lines East, with headquarters at Charlotte, N. C., succeeding **C. G. Rothhaus**, resigned.

### Obituary

**Colonel H. B. McCoy**, general manager of the Manila Railroad, in the Philippine Islands, died at Manila on September 30.

**R. B. Fowler**, general manager of the Arkansas & Louisiana Missouri, with headquarters at Monroe, La., died in that city on September 24.

**Charles S. Fee**, passenger traffic manager of the Southern Pacific, with headquarters at San Francisco, Cal., died in that city on September 25.

**William P. Jones**, resident engineer for the Colorado & Southern at the time of the construction of the "Georgetown Loop" in Colorado, died at Louisville, Ky., on September 25.

**C. H. Walton**, former superintendent of the Chicago Terminal division of the Pennsylvania, with headquarters at Chicago, who retired several years ago on account of ill health, died in Chicago on September 20.

**E. H. Rosecrans**, former superintendent of dining cars of the Southern, died on September 25 at Atlanta, Ga. Mr. Rosecrans was born at Belvidere, Ill., 53 years ago and entered the service of the Southern in 1889 as a brakeman. He later served as baggage man, dining car conductor and dining car agent and was promoted to superintendent of dining cars in 1919. In April of the current year his health demanded that his duties be lightened and he was accordingly appointed dining car agent at Atlanta, which position he held at the time of his death.



R. H. Howard